

Conn. Documents

CT DOCS

568

popd

1	1-UNIT STRUCTURE	29
2	2-OR-MORE-UNIT STRUCTURES	4
3	MOBILE HOMES OR TRAILERS (OCCUPIED ONLY)	0

Item 20

28. COUNT OF OCCUPIED AND VACANT YEAR-ROUND HOUSING UNITS BY NUMBER OF ROOMS IN UNIT

Southeastern Connecticut Regional Planning Agency

1	1 ROOM	1
2	2 ROOMS	0
3	3 ROOMS	2
4	4 ROOMS	4
5	5 ROOMS	11
6	6 ROOMS	11
7	7 ROOMS	11
8	8 ROOMS OR MORE	3

1970

- COUNT OF AGGREGATE NUMBER OF ROOMS IN OCCUPIED AND VACANT YEAR-ROUND HOUSING UNITS BY TENURE AND RACE OF HEAD

9	TOTAL OCCUPIED AND VACANT YEAR-ROUND UNITS	173
10	TOTAL OCCUPIED	173
11	OWNER OCCUPIED	144
12	RENTER OCCUPIED	29
13	TOTAL NEGRO OCCUPIED	SUPPRESSED
14	NEGRO OWNER OCCUPIED	SUPPRESSED
15	NEGRO RENTER OCCUPIED	SUPPRESSED
16	VACANT FOR RENT	SUPPRESSED
17	VACANT FOR SALE ONLY	SUPPRESSED

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29. COUNT OF OCCUPIED UNITS BY NUMBER OF PERSONS IN UNIT

1	1 PERSON	3
2	2 PERSONS	10
3	3 PERSONS	7
4	4 PERSONS	7
5	5 PERSONS	3
6	6 PERSONS	1
7	7 PERSONS	0
8	8 PERSONS OR MORE	2

- COUNT OF AGGREGATE NUMBER OF PERSONS IN OCCUPIED UNITS BY TENURE AND RACE OF HEAD

9	TOTAL OCCUPIED	111
10	OWNER OCCUPIED	111
11	RENTER OCCUPIED	0
12	TOTAL NEGRO OCCUPIED	SUPPRESSED
13	NEGRO OWNER OCCUPIED	SUPPRESSED
14	NEGRO RENTER OCCUPIED	SUPPRESSED

POPULATION

30. COUNT OF OCCUPIED UNITS BY TENURE AND RACE OF HEAD BY NUMBER OF PERSONS PER ROOM

AND

1	TOTAL	20
2	TOTAL	3
3	TOTAL	0
4	OWNER OCCUPIED 1.00 OR LESS	23
5	OWNER OCCUPIED 1.01 - 1.50	3
6	OWNER OCCUPIED 1.51 OR MORE	0
7	RENTER OCCUPIED 1.00 OR LESS	7
8	RENTER OCCUPIED 1.01 - 1.50	0
9	RENTER OCCUPIED 1.51 OR MORE	0
	NEGRO OCCUPIED 1.00 OR LESS	SUPPRESSED
	NEGRO OCCUPIED 1.01 - 1.50	SUPPRESSED
	NEGRO OCCUPIED 1.51 OR MORE	SUPPRESSED
	OWNER OCCUPIED 1.00 OR LESS	SUPPRESSED
	OWNER OCCUPIED 1.01 - 1.50	SUPPRESSED
	OWNER OCCUPIED 1.51 OR MORE	SUPPRESSED
	RENTER OCCUPIED 1.00 OR LESS	SUPPRESSED
	RENTER OCCUPIED 1.01 - 1.50	SUPPRESSED
	RENTER OCCUPIED 1.51 OR MORE	SUPPRESSED

31. CO. OCCUPIED AND VACANT YEAR-ROUND HOUSING

POPULATION AND DEVELOPMENT
SOUTHEASTERN CONNECTICUT PLANNING REGION

PROJECT C.P.A.-Ct.-01-26-1004

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Southeastern Connecticut Regional Planning Agency
139 Boswell Avenue, Norwich, Connecticut

January, 1972

ABSTRACT OF REPORT

1. Title: *Population and Development: Southeastern Connecticut Planning Region.*
2. Author: Regional Planning Program Staff of the Southeastern Connecticut Regional Planning Agency, 139 Boswell Avenue, Norwich Connecticut 06360.
3. Subject: Regional Population and Development Study.
4. Date: January, 1972.
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7. HUD Project No.: C.P.A.-Ct.-01-26-1004.
8. No. of Pages: 64
9. Abstract: This report was prepared for the Southeastern Connecticut Planning Region. It presents up-dated, basic planning information on population and housing based upon the 1970 Census. It also presents land use and development control information based upon a survey of existing conditions in 1970.

SOUTHEASTERN CONNECTICUT REGIONAL PLANNING AGENCY

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I. INTRODUCTION AND SUMMARY

22,475 housing units were reported in 1930, an increase of 10.3% since 1920. During 1930, 14,111 of these new units were added in the suburban areas. 31.5% of all housing units are located in the suburban areas, 44.9% in the urban areas, and 23.6% in the rural areas. (Source: Census Bureau, Bureau of Economic Warfare, 1930.)

The suburban areas are located in the following counties: Cook, DuPage, Kane, Kendall, Lake, Madison, McHenry, and Will. The urban areas are located in Cook, DuPage, Kane, Kendall, Lake, Madison, McHenry, and Will. The rural areas are located in Cook, DuPage, Kane, Kendall, Lake, Madison, McHenry, and Will.

INTRODUCTION

This report updates basic planning information based upon 1970 Census information and 1970 land use and zoning data. Census data are that of the first count summary tape which contains only aggregate tabulations derived from the 100% census questions. Sample question items such as type of employment, income, and education are not available at the present time, and consequently this information will be analyzed subsequently in conjunction with the social planning program. Land use and zoning data were developed from surveys conducted by the SCRPA staff. This study was prepared by Thomas Seidel, Regional Planner on the staff. A summary of the major findings of this report is presented below.

SUMMARY

POPULATION

The region's population increased 22.9% between 1960 and 1970 to a current population of 220,096. Most of this growth occurred in the suburban towns*, which accounted for over 72% of this gain. 50.1% of the region's total population now resides in Groton, New London, and Norwich, 45.3% in the suburban towns, and 4.6% in the rural towns. 3.4% of the total population is composed of black residents, and 0.8% are other minority ethnic groups. 48% of the region's total black population resides in the City of New London. 1970 regional population density was 394 persons per square mile with individual town densities ranging from 37 to 5,700 persons per square mile. This population is concentrated along the coast of Long Island Sound and the Thames River Valley. A regional population of over 275,000 persons is anticipated in 1980.

HOUSING

69,678 housing units were reported in 1970, an increase of 20.5% since 1960. Nearly 62% of these new units were added in the suburban towns. 51.5% of all housing units are located in the urban towns, 44.0% in the suburban towns, and 4.5% in the rural towns. Owner-occupied units account for 63% of all occupied units compared to 62% in 1960. 68.6% of all renter-occupied

* The suburban towns are Colchester, East Lyme, Griswold, Ledyard, Lisbon, Montville, Preston, Sprague, Stonington, and Waterford. The urban towns are Groton, New London, and Norwich. The rural towns are Bozrah, Franklin, North Stonington, Salem, and Voluntown.

units are located in the urban towns of Groton, New London, and Norwich. 63.6% of the region's housing supply is composed of single family homes and mobile homes as contrasted to 68% in 1960. Over 17,700 additional housing units are expected to be needed by 1980.

LAND USE

14% of the region's 559 square mile land area is developed, with over 90% of this development located in the urban and suburban towns. Residential uses are the largest consumer of developed land, accounting for 48.4% of this total. State preserves, reservoir sites and recreational uses account for 12% of the region's total land area, agricultural uses for 7%, leaving 67% of the region undeveloped. 67% of the region's growth in developed land uses over the past decade has occurred in the suburban towns.

ZONING

Sixteen out of the 18 communities in the region have adopted some form of zoning regulations, and in addition, nine subunits (boroughs, districts, and associations) have zoning powers separate from those of the town. 91% of the total zoned land is intended for residential uses, and of this total residential zoning 94.6% is intended for low density lots (20,000 square feet or larger). The region has more than ample acreage intended for industrial and commercial uses.

II. POPULATION

THE REGION IN PERSPECTIVE

The 1970 Census of Population and Housing revealed a population of 220,096* for the 18 towns and cities that comprise the Southeastern Connecticut Planning Region. This is 7.3% of Connecticut's 1970 population of 3,032,217, while 11.7% of the state's land area is located in Southeastern Connecticut. During the decade of 1960-1970 Connecticut's population increased 19.6% from the 2,535,234 inhabitants of 1960. The region's current population is a 22.9% increase over the 179,060 residents reported in 1960. Nationally, the country grew about 13.6% during the decade, the slowest rate of growth since the decade of the 1930's.

REGIONAL GROWTH

During the decade of the 1960's, Norwich remained the most populated town in the region while Groton replaced New London as the second most populated town. Waterford, Stonington, and Montville remained, respectively, the region's 4th, 5th, and 6th most populated towns, although Montville closed the gap to Stonington from a 6,210 difference in 1960 to only 278 in 1970. The town with the least population is now Franklin, as opposed to Salem in 1960. These rankings are shown in Table 1.

Between 1960 and 1970 rates of growth varied greatly for the individual towns and cities of the region. Ledyard had the largest numerical increase (9,163) as well as the highest rate of change (169.8%) to lead the region for the second decade in a row in percentage increase. Next fastest growing towns were Montville, North Stonington, and East Lyme with respective percentages of 101.9, 89.1, and 68.1. Franklin had the smallest numerical increase 382, while Norwich had the slowest rate of growth (4.1%). New London experienced a population loss (2,552) for a negative rate of change of 7.5%. Table 2 depicts these percentage and absolute changes for each of the towns and cities of the region.

GROWTH CHARACTERISTICS

Population growth or loss in Southeastern Connecticut re-

* This figure has been revised to 220,402 by the Census Bureau based on errors found after detailed tabulations were completed. Since detailed characteristic tables have not been revised to reflect this change, all figures in the report are based on the 220,096 figure.

TABLE 1: MUNICIPAL POPULATION AND RANK, 1960-1970

<u>Municipality</u>	<u>Total Population</u>		<u>Population Rank</u>	
	1960	1970	1960	1970
Norwich	38,506	40,096	1	1
Groton	29,937	38,523	3	2
New London	34,182	31,630	2	3
Waterford	15,391	17,227	4	4
Stonington	13,969	15,940	5	5
Montville	7,759	15,662	6	6
Ledyard	5,395	14,558	9	7
East Lyme	6,782	11,399	7	8
Griswold	6,472	7,763	8	9
Colchester	4,648	6,603	11	10
Preston	4,992	4,930	10	11
North Stonington	1,982	3,748	14	12
Sprague	2,509	2,912	12	13
Lisbon	2,019	2,808	13	14
Bozrah	1,590	2,036	15	15
Salem	925	1,453	18	16
Voluntown	1,028	1,452	16	17
Franklin	974	1,356	17	18
REGIONAL TOTALS:	179,060	220,096		

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.
1960 Census of Population, Bureau of the Census.

TABLE 2: POPULATION CHANGE, 1960-1970

	Source of Change					
				Natural	Net	
	1960	1970	% Change 1960-1970	Absolute Change	Increase	Migration
Ledyard*	5,395	14,558	169.8	9,163	2,224	6,939
Montville	7,759	15,662	101.9	7,903	2,308	5,595
North						
Stonington	1,982	3,748	89.1	1,766	451	1,315
East Lyme*	6,782	11,399	68.1	4,617	1,464	3,153
Salem	925	1,453	57.1	528	101	427
Colchester	4,648	6,603	42.1	1,955	787	1,168
Voluntown	1,028	1,452	41.2	424	181	243
Franklin	974	1,356	39.2	382	112	270
Lisbon	2,019	2,808	29.1	789	319	470
Groton*	29,937	38,523	28.7	8,586	7,975	611
Bozrah	1,590	2,036	28.1	446	204	242
Griswold	6,472	7,763	19.9	1,291	876	415
Sprague	2,509	2,912	16.1	403	256	147
Stonington	13,969	15,940	14.1	1,971	1,553	418
Waterford	15,391	17,227	11.6	1,836	1,685	151
Norwich**	38,506	40,096	4.1	1,590	4,171	(2,581)
Preston**	4,992	4,930	(1.2)	(62)	347	(409)
New London*	34,182	31,630	(7.5)	(2,552)	3,828	(6,380)
REGIONAL						
TOTALS:	179,060	220,096	22.9	41,036	28,842	12,194

* Population figures for these towns include institutional and/or military personnel.
 ** See text for explanation.

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.
 1960 Census of Population, Bureau of the Census.

sulted from net migration and natural increase. Natural increase is the excess of births over deaths while net migration is the difference between natural increase and the total population change.

The region grew by 41,036 persons between 1960 and 1970, of which 28,842, or 70.3%, was natural increase and 12,194, or 29.7%, was net in-migration. The corresponding percentages for 1960 were 62.3 and 37.7 so there has been a decrease in in-migration and a rise in natural increase as components of the population growth.

The towns of Ledyard, Montville, North Stonington, East Lyme, Salem, Colchester, Voluntown, Franklin, Lisbon, and Bozrah experienced population gains of which net in-migration accounted for more of the increase than did births. In the towns of Groton, Griswold, Sprague, Stonington, and Waterford natural increases accounted for more of the population gain than did net in-migration. The City of Norwich experienced a net out-migration but had ample natural increase to give it a total population gain. The Town of Preston and the City of New London had net out-migrations which were not covered by natural increase, thereby giving them net population losses. These relationships are noted in Table 2.

One should note that the figures for Preston can be misleading without consideration of the Norwich State Hospital. This Hospital is located in both the City of Norwich and the Town of Preston and the population figures in Table 2 reflect this distribution. The patient population of the Hospital decreased by approximately half between 1960 and 1970, and since most of this patient population physically resided in Preston, the patient decrease caused Preston's overall decrease. But when one separates out the institutional population in Preston, the non-institutional figures for Preston for 1960 and 1970 are respectively 2,520 and 3,593, giving a non-institutional population increase of 1,073 people, or 42%, for the decade. This placed Preston in the category of towns which grew more from net in-migration than from natural increases. The detailed characteristics presented in this report are based on the 3,593 population figure for Preston.

The net migration losses for the urban towns of New London and Norwich coupled with the net in-migration gains of towns such as Ledyard, Montville, and East Lyme clearly indicate population is continuing the move to the suburbs as noticed in the 1960 Census. Even the rural towns of Franklin, North Stonington, Salem, and Voluntown had net in-migration gains which indicate that with increased income and mobility families seek the less dense areas of the suburban and rural towns. This trend is accelerating compared to that experienced during the decade of 1950-1960. During that decade the region's population increased by 38,891 persons, of whom 57.9% were gained by the suburban towns, 37.5% by the urban towns and 4.6% by the rural towns. The corresponding figures for the 1960-1970 decade increase of 41,036 persons are 72.8%,

18.6%, and 8.6%. This indicates that during the decade of 1960-1970 the urban towns' percentage share of the region's population growth decreased 50%, the suburban towns' share increased 25%, and the rural towns' increased 87%.

POPULATION DISTRIBUTION AND DENSITY

The 1970 density of population for the region as a whole was 394 persons per square mile as compared to 320 persons per square mile in 1960. The region's density is still well under Connecticut's average of 605 persons per square mile.

The distribution pattern of this population is shown on Figure 1, which is based on the 1970 Census of Population and Housing data for enumeration districts. This pattern follows quite closely the inverted "T" first identified in SCRPA's 1963 study, Population and Housing. This inverted "T" is basically composed of population concentrated along the coast of Long Island Sound and the Thames River Valley. Pockets of concentrated population are also found along tributary streams of the Thames River, in scattered subdivisions, and in the Borough of Colchester. The remainder of the population distribution is scattered. A comparison of the 1960 population distribution map with the 1970 one indicates that population growth outside of this inverted "T" is thinly scattered, although concentrations do appear in extensive suburban residential developments such as the Highlands in Ledyard and Montville Manor in Montville.

One can see from this distribution that population densities vary for each of the towns and cities of the region. New London has a density of over 5,700 persons per square mile because of its small land area and large concentration of people. At the other end of the scale, Voluntown has only 37 persons per square mile.

Groton, New London, and Norwich each had 1970 population densities of greater than 1,000 persons per square mile and are urban in character. These are the region's centers for commercial, industrial, and military-defense activities. 110,249 people, or 50.1%, of the region's population reside in these three towns, and yet they account for only 11% of the region's land area.

Franklin, North Stonington, Salem, and Voluntown have less than 100 persons per square mile and are classified as rural. Bozrah with just over 100 persons per square mile (103) is classified as rural for purposes of this report. These rural towns have 10,045 inhabitants for 4.6% of the region's population, but they account for 29% of the region's land area.

The balance of ten towns have densities ranging from 138-516 persons per square mile and are classified as suburban. These

SOUTHEASTERN CONNECTICUT REGION

U.P.A. PROJECTS CONN. P-120 AND P-1004
 THE PREPARATION OF THIS REPORT WAS FINANCED IN PART THROUGH AN URBAN PLANNING GRANT FROM THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, UNDER THE PROVISIONS OF SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED, THROUGH A REGIONAL PLANNING ASSISTANCE GRANT FROM THE OFFICE OF STATE PLANNING, AND THROUGH CONTRIBUTIONS FROM THE MEMBER COMMUNITIES OF THE SOUTHEASTERN CONNECTICUT REGIONAL PLANNING AGENCY.

POPULATION DISTRIBUTION, 1970

ONE DOT EQUALS 50 PEOPLE

SOURCE: 1970 FIRST COUNT SUMMARY TAPE
 U.S. CENSUS OF POPULATION

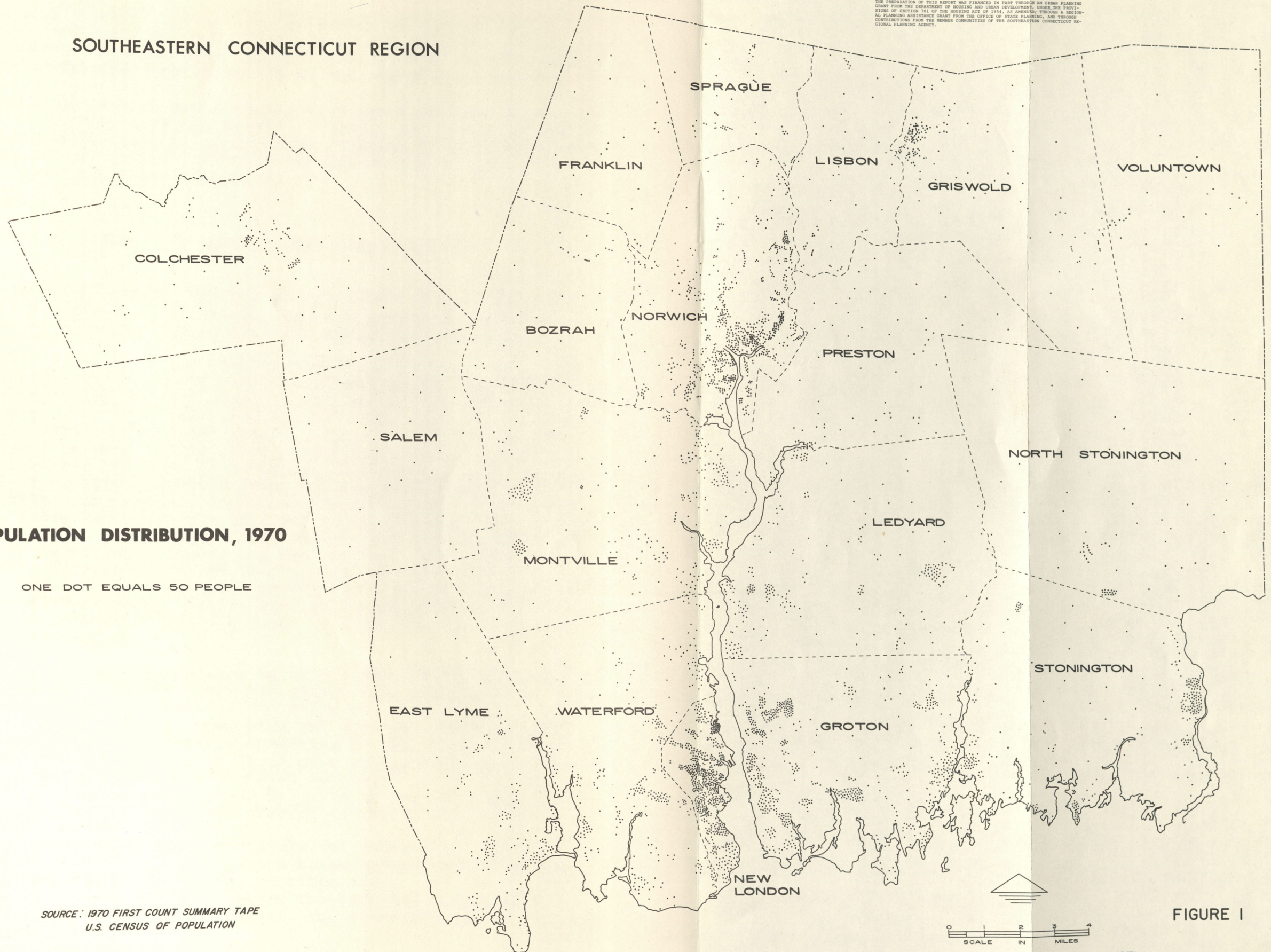


FIGURE 1

PREPARED BY THE SCRPA STAFF - 1971

THE SOUTHEASTERN CONNECTICUT REGION

STAMFORD

WATERBURY

CONNECTICUT

BOZEMAN

BALTIM

POPULATION DISTRIBUTION 1970

WATERBURY

WATERBURY

WATERBURY

towns are Colchester, East Lyme, Griswold, Ledyard, Lisbon, Montville, Preston, Sprague, Stonington, and Waterford. The 99,802 people of these towns account for 45.3% of the region's population and are located on 60% of the region's land area.

The urban and suburban towns, with the exception of Colchester, together form the Norwich, Groton, New London Standard Metropolitan Statistical Area. Also included in this SMSA is the town of Old Lyme which is in New London County but not in the Southeastern Planning Region.

POPULATION AGE AND SEX CHARACTERISTICS

Population age and sex characteristics for Southeastern Connecticut are shown in Figure 2. The age groupings depicted correspond to those used in 1963 for comparison purposes.

This grouping of age-classes generally corresponds to the stages of one's life cycle. Most absolute growth took place in the student-young workers category followed by the children category. Mature workers increased slightly more than prime workers while the retired increased least. Figure 3 shows these age groups as a percent of the total population compared to 1960. Children remain the largest category, accounting for 29.5%, down slightly from 1960. Student-young workers have increased to 18.6% while prime workers continued to decline to 24.6%. Mature workers increased only 1/10 of a percent while the elderly decreased to 8.6%. The significant change is the continued decline of the prime worker category and the increase in the student-young worker category, which is only 1/10 percent behind mature workers in percentage of total population. Statewide, this age group of student-young workers also accounted for the biggest age grouping change since 1960, growing to over 16% of the state's 1970 population.

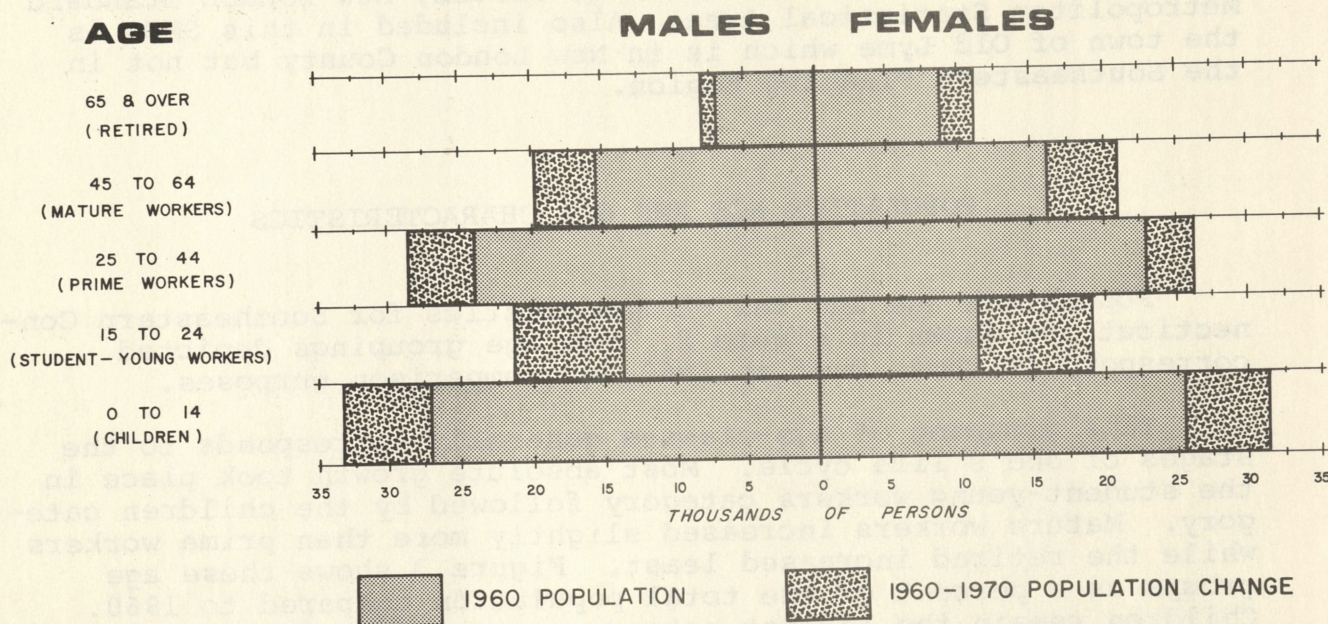
Males outnumbered females by only 1,408 for the regional total, although the differences are greater in individual age groupings. Men outnumber women in the children, student-young worker, and prime workers age groups, with the greatest difference of 2,805 more males than females occurring in the student-young worker age bracket. This is due in large part to the military installations located in the area. Females outnumber males by 1,284 in the mature workers category and by 3,576 in the retired grouping, which can be explained by the greater longevity enjoyed by women.

Individual city and town totals for age-sex characteristics are shown in Table 3. On a percentage basis children are located about equally in the urban and suburban towns with 47.4% of the group in the urban towns, 47.5% in the suburban towns, and the remaining 5.1% in the rural towns. The student-young workers are

POPULATION CHARACTERISTICS

SOUTHEASTERN CONNECTICUT REGION

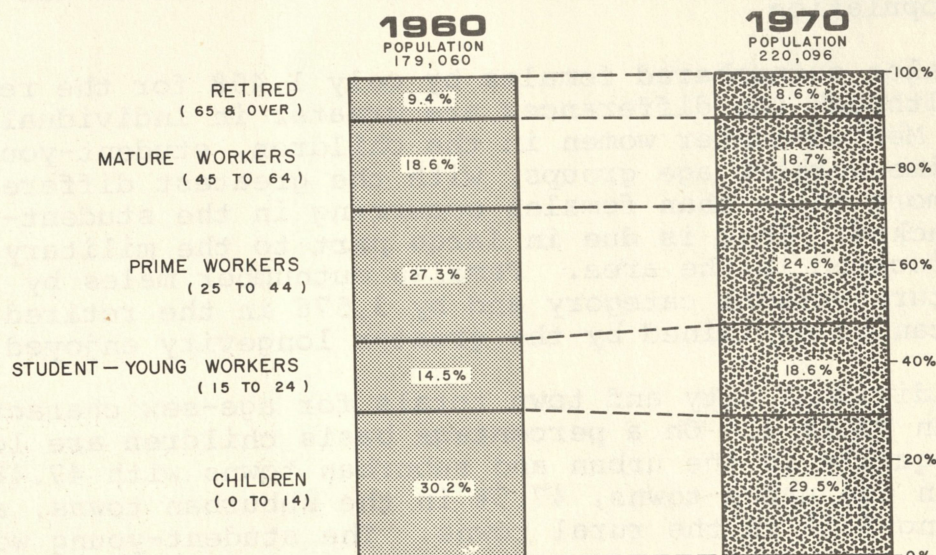
AGE-SEX DISTRIBUTION



SOURCE: 1970 CENSUS 1ST COUNT SUMMARY TAPE, BUREAU OF THE CENSUS.
1960 CENSUS OF HOUSING AND POPULATION, BUREAU OF THE CENSUS.

FIGURE 2

AGE GROUPS AS PERCENT OF TOTAL POPULATION



SOURCE: 1970 CENSUS 1ST COUNT SUMMARY TAPE, BUREAU OF THE CENSUS.
1960 CENSUS OF HOUSING AND POPULATION, BUREAU OF THE CENSUS.

FIGURE 3

TABLE 3: AGE-SEX CHARACTERISTICS OF MUNICIPAL POPULATIONS, 1970

	Total	Children, 0-14		Student, 15-24		Prime Workers, 25-44		Mature Workers, 45-64		Retired, 65+	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
URBAN TOWNS											
38,523		6,611	6,313	4,637	3,013	5,761	4,876	2,590	2,695	826	1,201
31,630		3,318	3,410	4,753	4,099	3,465	2,835	2,731	3,313	1,383	2,323
41,433		5,762	5,353	3,166	3,772	4,503	4,578	4,517	4,916	1,933	2,933
111,586		15,691	15,076	12,556	10,884	13,729	12,289	9,838	10,924	4,142	6,457
SUBURBAN TOWNS											
6,603		1,125	1,116	382	438	893	872	600	546	284	347
11,399		1,897	1,869	719	811	1,493	1,599	1,029	1,058	390	534
7,763		1,201	1,139	614	704	843	854	817	843	303	445
14,558		2,358	2,230	2,650	880	2,613	1,895	814	765	158	195
2,808		474	400	233	238	333	357	284	288	101	100
15,662		2,954	2,722	1,093	1,222	2,315	2,292	1,184	1,129	328	423
3,593		641	569	249	244	463	485	364	344	100	134
2,912		435	437	236	262	326	326	282	300	131	177
15,940		2,274	2,166	1,096	1,293	1,809	1,807	1,733	1,952	734	1,076
17,227		2,504	2,362	1,320	1,329	1,916	2,043	2,023	2,147	630	953
98,465		15,863	15,010	8,592	7,421	13,004	12,530	9,130	9,372	3,159	4,384
SUBURBAN TOTALS:											
RURAL TOWNS											
2,036		338	305	150	132	275	262	236	191	71	76
1,356		217	196	95	91	174	188	129	140	58	68
3,748		718	666	233	277	506	545	304	289	89	121
1,453		223	220	104	103	203	194	135	150	67	54
1,452		218	223	101	118	170	162	158	148	76	78
10,045		1,714	1,610	683	721	1,328	1,351	962	918	361	397
RURAL TOTALS:											
220,096		33,268	31,696	21,831	19,026	28,061	26,170	19,930	21,214	7,662	11,238
REGIONAL TOTALS:											

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

more concentrated in the urban towns with over 57% of this total age group located there, 39.2% in the suburban towns and only 3.4% in the rural towns. Prime workers and mature workers are about evenly divided on a percentage basis between the urban and suburban towns with a slight percentage advantage to the urban towns. Retired people are similar to the student-young workers in that 56.1% of the group is located in the urban towns, 39.9% in the suburban towns, and 4% in the rural towns.

RACE CHARACTERISTICS

Minority ethnic groups account for a very small percentage of Southeastern Connecticut's population; however, the percentages vary for the different towns and cities. Blacks account for 3.4% of the region's total population, with a 62.1% increase over the 4,544 blacks reported in 1960. During this same period the white population increased by 21.4% to 210,868 to account for 95.8% of the total population. As a component of total population, blacks account for less than one percent in the rural towns to 11.2% in New London. Statewide, blacks account for 6% of the total population. However, if one examines some of the urban enumeration districts* the relative concentration of blacks increases considerably. 2,461 of the City of New London's 3,542 blacks are located in only 6 block groups** encompassing 495 acres of land, and they account for 33% of the region's black population. The black percentage of total population in these block groups ranges from 21 to 38.3%, which is two to three times greater than the black percentage of total population for the City as a whole and six to eleven times the regionwide average. Equivalent 1960 enumeration districts showed lower percentages of black population, with only three enumeration districts over 20% in black population. These figures indicate that during the decade there has been an increase in the concentration of black population in the City.

In the City of Norwich only two enumeration districts had a black percentage of total population of over 10% and both of these were less than 20%. There were modest percentage increases in black population from some equivalent 1960 enumeration districts, but some displayed decreases in black percentage of total population. Although total black population increased in these areas, there appears to have been no significant increase in the concentration of black residents.

* An enumeration district is a geographic area used by the Census to count people and usually averages about 700 inhabitants.

** A block group is a geographic area roughly equivalent to an enumeration district.

The geographic location of blacks has changed only slightly since 1960. In that year 86.8% of the black resided in the urban towns, 13.0% in the suburban towns, and 0.2% in the rural towns. The corresponding figures for 1970 are, respectively, 84.2%, 15.4% and 0.4%. (Table 4.) Within each of these given classes of towns the black population increased. Specifically, the black population of the urban towns increased 57.3% (3,945 to 6,204), the suburban towns 92% (590 to 1,133), and the rural towns 211% (9 to 28). Although these percentage increases for the suburban and rural towns seem impressive, in terms of actual numbers there has been little change. Still only 15.8% of the blacks live in the suburban and rural towns, with the balance of 84.2% concentrated in the urban towns.

American Indians, Japanese, Chinese, Filipino, Hawaiian, Korean, and other non-white nationalities account for only 0.8% of the region's population. 72% of these nationalities are located in the urban towns, 26% in the suburban towns, and 2% in the rural towns. So, although they are clustered in the urban towns, they are not as concentrated as the black population.

FAMILY SIZE

Average family size is determined by dividing the noninstitutional and group population by the number of occupied housing units. For Southeastern Connecticut the average family size was 3.17 in 1970. Family sizes for the towns and cities of the region varied between a low of 2.7 and a high of 3.7. Generally the urban towns tend to have smaller family sizes than the suburban or rural towns. If large households (6 or more persons) are compared with family sizes, the towns with the greatest percentage of their occupied units occupied with 6 or more persons are also the towns with the largest family sizes. These towns are in the suburban and rural classification and the following section on housing will show that these are the towns where the owner-occupied, single-family units have predominated, while the renter-occupied and multi-family units are concentrated in the urban towns. Existing zoning in these towns also favors the prevalence of the single-family home.

POPULATION PROJECTIONS

The need for revised projections was occasioned by the availability of 1970 Census data which led to a review of the previous projections contained in the Regional Plan. The 1980 population projection for Southeastern Connecticut is shown in Table 5. The 1990 figures are based on the 1980 projections and should be regarded as best estimates subject to revision in 1980 after the

TABLE 4: BLACK POPULATION, 1960-1970

	<u>Blacks</u> <u>1970</u>	<u>% Of</u> <u>Total</u>	<u>Blacks</u> <u>1960</u>	<u>% Of</u> <u>Total</u>
<u>URBAN TOWNS</u>				
Groton	1,395	18.9	829	18.2
New London	3,542	48.1	2,286	50.3
Norwich	<u>1,267</u>	<u>17.2</u>	<u>830</u>	<u>18.3</u>
URBAN TOTALS:	6,204	84.2	3,945	86.8
<u>SUBURBAN TOWNS</u>				
Colchester	183	2.5	151	3.3
East Lyme	103	1.4	33	.7
Griswold	12	.2	8	.2
Ledyard	185	2.5	13	.3
Lisbon	1	-	3	-
Montville	225	3.1	24	.6
Preston	13	.2	167	3.7
Sprague	3	-	1	-
Stonington	111	1.5	71	1.6
Waterford	<u>297</u>	<u>4.0</u>	<u>119</u>	<u>2.6</u>
SUBURBAN TOTALS:	1,133	15.4	590	13.0
<u>RURAL TOWNS</u>				
Bozrah	5	.07	0	
Franklin	3	.04	0	
North Stonington	13	.20	7	.16
Salem	3	.04	0	
Voluntown	<u>4</u>	<u>.05</u>	<u>2</u>	<u>.04</u>
RURAL TOTALS:	<u>28</u>	<u>.4</u>	<u>9</u>	<u>.2</u>
REGIONAL TOTALS:	7,365	100.0	4,544	100.0

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.
1960 Census of Population, Bureau of the Census.

TABLE 5: POPULATION PROJECTIONS, 1970-1990

<u>Town</u>	<u>1970 (Actual)</u>	<u>1980</u>	<u>1990</u>
Bozrah	2,036	2,550	4,080
Colchester	6,603	9,905	17,330
East Lyme*	11,399	16,600	20,750
Franklin	1,356	2,196	4,400
Griswold	7,763	9,680	12,780
Groton*	38,523	46,493	54,840
Ledyard*	14,558	18,409	23,209
Lisbon	2,808	3,933	5,510
Montville	15,662	22,912	35,510
New London*	31,630	33,000	34,320
North Stonington	3,748	5,748	9,190
Norwich*	40,096	47,500	54,625
Preston	4,930	5,303	8,244
Salem	1,453	2,600	5,480
Sprague	2,912	3,617	4,780
Stonington	15,940	18,330	23,915
Voluntown	1,452	2,287	4,071
Waterford*	<u>17,227</u>	<u>24,000</u>	<u>30,000</u>
REGIONAL TOTALS:	220,096	275,063	353,034

* Population projections for these towns include institutional and military personnel.

SOURCE: 1970 First Count Summary Tape, Bureau of the Census, SCRPA Projections.

next census. Their purpose is to provide a basis for estimating other needs such as community facilities, housing, and transportation. The methodology of projections for each of the towns is available for review in the Agency office. If accomplished this 1980 population will be a 25% increase in population over the decade of the 1970's as compared to a 23% increase during the 1960's.

Town	1970 Actual	1980 Projection
Borah	2,035	2,520
Colchester	2,035	2,520
East Lyme*	2,035	2,520
Franklin	2,035	2,520
Griswold	2,035	2,520
Groton*	2,035	2,520
Ledyard*	2,035	2,520
Lisbon	2,035	2,520
Middletown	2,035	2,520
New London*	2,035	2,520
North Stonington	2,035	2,520
Norwich	2,035	2,520
Preston	2,035	2,520
Salmon	2,035	2,520
Sprague	2,035	2,520
Stonington	2,035	2,520
Voluntown	2,035	2,520
Waterford	2,035	2,520

REMARKS: * Towns with no population in 1970, but included in 1980 projection.

* Population projections for these towns include institutional and military personnel.

SOURCE: 1970 First Count Summary Tape, Bureau of the Census.

SCPA Projections

III. HOUSING

HOUSING QUANTITY, TYPES, DISTRIBUTION

69,678 housing units* were tabulated in the 1970 Census of Population and Housing, an increase of 11,872 units since 1960. Of these 69,678 units, 64,388, or 92.4%, were occupied at the time of the Census while 5,290, or 7.6%, were unoccupied, the lowest vacancy percentage since 1940. These unoccupied units were vacant for sale, vacant for rent, vacant year-round, and vacant-seasonal or vacant-migratory. If seasonal and vacant-migratory units are excluded from the total stock, because they are intended for occupancy during certain seasons rather than for year-round use, the vacancy percentage decreases to 5.3%.

Occupied housing units are divided into two types, owner-occupied and renter-occupied. Owner-occupied units account for 63% of the total occupied units and renter-occupied units for 37%. These percentages are very close to the 1960 ratio which showed respective percentages of 62 and 38. At the state level 62.5% of the occupied units were owner-occupied while 37.5% were renter-occupied, and so the regional occupant status compares quite closely to state proportions.

The pattern of distribution of owner-occupied and renter-occupied units varies with the type of town, as shown in Table 6. Owner-occupied units are slightly greater in number than renter-occupied units in the urban towns (50.8% vs. 49.2%). Most of the region's multi-family housing is located in these towns. Indeed, of the region's 23,841 renter-occupied units, 68.6% are located in the three urban towns of Groton, New London, and Norwich. In the suburban towns owner-occupied units increase to 75.4% and renter-occupied decrease to 24.6% of total occupied units. These are primarily the towns where new single-family dwellings are locating, and of the region's 40,547 owner-occupied units, 52.6% are located in these towns. The suburban towns of Ledyard, Lisbon, Preston, and Waterford had the highest percentage of owner-occupied units with over 80% of the occupied units in the owner-occupied category. Griswold and Sprague had the lowest percentage of owner-occupied units with less than 65% of the occupied units in the owner-occupied category. Owner-occupied units are even more prevalent in the rural towns, where 81.8% of the occupied units are owner-occupied, leaving 18.2% renter-occupied.

These percentages of owner-occupied and renter-occupied units for the different classes of towns compare quite closely to the 1960 proportions. In that year 47.7% of the occupied units were

* A housing unit is a house, an apartment, a group of rooms, or a single room occupied or intended for occupancy as separate living quarters.

TABLE 6: HOUSING OCCUPANCY, 1970

	URBAN TOWNS*		SUBURBAN TOWNS**		RURAL TOWNS***	
	NUMBER OF UNITS	PERCENT	NUMBER OF UNITS	PERCENT	NUMBER OF UNITS	PERCENT
Owner-Occupied	16,857	50.8	21,314	75.4	2,376	81.8
Renter-Occupied	<u>16,348</u>	<u>49.2</u>	<u>6,965</u>	<u>24.6</u>	<u>528</u>	<u>18.2</u>
REGIONAL TOTALS:	33,205	100.0	28,279	100.0	2,904	100.0

* The urban towns are Groton, New London and Norwich.

** The suburban towns are Colchester, East Lyme, Griswold, Ledyard, Lisbon, Montville, Preston, Sprague, Stonington, and Waterford.

*** The rural towns are Bozrah, Franklin, North Stonington, Salem and Voluntown.

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

renter-occupied in the urban towns and 52.3% were owner-occupied, and so there has been a small increase in renter-occupied units and a decrease in owner-occupied units as a percentage of total occupied units for the urban towns. In the suburban and rural towns there has been a slight decrease in renter-occupied units and an increase in owner-occupied units as a percentage of total occupied units. The 1960 figures for the suburban towns were 74.5% owner-occupied and 25.5% renter-occupied, and for the rural towns 81.1% owner-occupied and 18.9% renter-occupied.

RENTAL UNITS, VACANCIES, RENTAL RATES

Of the region's 25,589 rental units 1,748 were vacant at the time of the Census for a regional vacancy percentage of 6.8%. The corresponding rental vacancy at the state level was 4.2%. In 1960 the region had 20,884 rental units of which 1,324 were vacant for a vacancy percentage of 6.4%. The Miami, Ohio, Valley Region Housing Plan determined an acceptable vacancy rate in the range of 3% to 6% depending on the type of housing and the area in question. Ring and North* suggest that rental vacancy ratios exceeding 3-5% are indicative of either oversupply or overpricing. A 1970 Federal Housing Administration Study of the New London Housing Market** using 1968-1969 data indicated a rental vacancy ratio of 5.9%. The equivalent area using 1970 Census data resulted in a rental vacancy ratio of 7%. 1970 individual town and city rental vacancy rates varied from a high of 9.7% of the total rental units in Colchester to no vacant-for-rent units in Franklin.

Of the 4,705 rental units added since 1960, 54.6% were located in the urban towns, 42% in the suburban towns, and 3.4% in the rural towns. Not only do the urban towns contain the highest percentage of renter-occupied units (Table 6) as well as new rental units, they also contain the highest percentage of vacant rental units. Of the 1,748 vacant rental units, 74.7% were located in the urban towns, 24.4% were in the suburban towns, while only 0.9% of the vacant rental units were in the rural towns. The high vacancy percentages in urban towns such as Norwich and New London can be due in part to the net out-migration that occurred in these cities, leaving behind rental units of either the multi-family or older single-family home variety, which often times are non-competitive because of age and condition. In addition, many of these vacant for rent units have not been on the market for very long, indicating a high turnover. Of the region's 1,748 vacant rental units, 857 or nearly 50% had been offered for rent for less than two months prior to the census. 77% of these 857 units were

* Alfred A. Ring and Nelson L. North. Real Estate Principles and Practices, 6th ed. (Englewood Cliffs, 1967), page 42.

** The market area consists of East Lyme, Groton, Ledyard, Montville, New London, Norwich, Preston, Stonington and Waterford.

located in the urban towns, indicating that units available for less than two months were concentrated in Norwich, New London, and Groton. The FHA report referred to above indicated that of new FHA insured multi-family projects, over 99% of all available units were occupied.

The implication of this data is that although 6.8% of the region's rental housing supply was available, the fact that many of these units had been available for only a short period of time, the fact that many of the units are the older, less desirable units in the urban towns, and the fact that new FHA insured units are being satisfactorily absorbed indicates that the rental needs of such groups as the low income, non-white, elderly and large household sections of the regions' population still have not been met.

Aggregate rental rate data are available for renter-occupied units except single-family homes on lots of ten acres or more. Of the total occupied rental universe, rate data are available on 98% of the units. The balance is either in the ten acres or greater category or not reported by the citizen on his census questionnaire. There does not appear to be any correlation between the type of town and the rental rate. Rental rates are published for the categories shown in Table 7 which depicts the number of units rented in each category for each town as well as the median range. The median range is the middle value in the rental distribution, above and below which there are an equal number of rents. At the low end of the scale are the suburban towns of Griswold and Sprague with median ranges of \$60-79 and \$40-59 per month respectively. These two towns have the highest percentages of rents in the lowest categories. 73.4% of the rents reported in Griswold were less than \$80 per month and 71.9% of the monthly rents in Sprague were in this same category. The City of Norwich and the Town of Bozrah have low median ranges of \$60-79 with respective percentages of 58.5 and 52.9 of the reported units renting for less than \$80 per month. The Town of Stonington had a median range of \$60-79 with 46.2% of its rented units at less than \$80 per month.

At the other end of the scale are the towns reporting rents of \$300 or greater per month, which in all cases were less than 1% of the total rental units. The Towns of East Lyme, Groton, Ledyard, New London, Norwich, and Stonington had rental units in this category.

The towns with the highest median rental rates were East Lyme, Ledyard, Montville, and Salem with a monthly median range of \$120-149. The reader will recall that during the last decade Ledyard was the fastest growing town in the region, Montville the second fastest growing town, East Lyme the fourth, and Salem the fifth fastest growing. This high median rent range reflects in part the new apartment developments that have occurred in these towns.

TABLE 7: RENTAL HOUSING DATA, 1970

	RENTAL UNIT VALUES																
	NUMBER OF MONTHLY RENTS AT:																
	Less Than \$40	\$40-59	\$60-79	\$80-99	\$100-119	\$120-149	\$150-199	\$200-299	\$300 Or Greater	No Cash Rent	Total Units Reported	Total Renter Occupied Units	Median Rental Range	Percent Of Units Rented At Less Than \$80 Per Month	Units Vacant For Rent	Total Rental Units (Occupied And For Rent)	Percent Of Total Rental Units Vacant For Rent
URBAN TOWNS																	
Groton	62	128	309	398	961	802	688	53	4	1,357	4,762	4,817	\$110-119	10.5	356	5,173	6.9
New London	137	572	1,185	1,204	835	824	642	123	9	1,73	5,704	5,725	80-99	33.2	409	6,134	6.7
Norwich	468	1,256	1,665	812	597	449	279	12	1	221	5,760	5,806	60-79	58.8	541	6,347	8.5
URBAN TOTALS:	667	1,956	3,159	2,414	2,393	2,075	1,609	188	14	1,751	16,226	16,348	\$ 80-99	35.6	1,306	17,654	7.4
SUBURBAN TOWNS																	
Colchester	16	37	69	89	91	67	43	10	0	32	454	482	\$ 80-99	26.8	52	534	9.7
East Lyme	12	28	71	80	122	228	116	21	1	58	737	758	120-149	15.0	37	795	4.7
Griswold	95	288	298	98	63	23	5	0	0	57	927	954	60-79	73.4	50	1,004	5.0
Ledyard	10	17	19	26	52	203	149	48	4	52	580	616	120-149	7.9	42	658	6.4
Lisbon	7	23	11	7	10	41	3	0	0	72	109	130	100-119	37.6	9	139	6.5
Montville	40	51	63	102	150	228	306	6	0	1,018	1,018	1,063	120-149	15.1	64	1,127	5.7
Preston	8	11	21	26	12	31	11	0	0	29	149	161	80-99	26.9	9	170	5.3
Sprague	32	132	62	36	18	15	3	0	0	16	314	325	40-59	71.9	19	344	5.5
Stonington	115	261	373	235	170	213	80	24	6	145	1,622	1,663	60-79	46.2	101	1,764	5.7
Waterford	49	55	76	116	132	159	74	14	0	80	755	813	100-119	23.9	43	856	5.0
SUBURBAN TOTALS:	384	903	1,063	815	820	1,208	790	123	11	548	6,665	6,965	\$100-119	35.2	426	7,391	5.8
RURAL TOWNS																	
Bozrah	6	29	21	13	7	8	6	0	0	16	106	121	\$ 60-79	52.9	6	127	4.7
Franklin	3	5	11	14	2	2	4	0	0	7	48	63	80-99	39.7	0	63	.0
North Stonington	8	8	16	16	20	19	11	3	0	31	132	166	100-119	24.3	1	167	.6
Salem	3	4	1	4	11	30	9	2	0	8	72	86	120-149	11.2	2	88	2.3
Voluntown	7	10	14	11	14	5	1	0	0	17	79	92	60-79	39.3	7	99	7.1
RURAL TOTALS:	27	56	63	58	54	64	31	5	0	79	437	528	\$100-119	33.4	16	544	2.9
REGIONAL TOTALS:	1,076	2,915	4,285	3,287	3,267	3,347	2,430	316	25	2,378	23,328	23,841	\$ 80-99	35.5	1,748	25,589	6.8

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

Regionally, the monthly median rental range was \$80-99 for those units reported, with 35.5% of the units renting at less than \$80 per month and 0.11% renting at greater than \$300 per month.

Aggregate rental rate data for vacant-for-rent units indicate that the monthly median rent asked was also in the \$80-99 range. Of the total vacant-for-rent units, 43.9% had an asking rent of \$100 per month or greater and 35.9% had an asking rent of less than \$80 per month. The rental range with the highest percentage of total rental units vacant-for-rent was the \$40-59 range with 9.1% of the total units at this rent vacant-for-rent. Of the 292 units in the region for rent in this range, 59% were located in Norwich which had 39.3% of its total vacant-for-rent units at an asking rent of less than \$60 per month. The rental range with the next highest percentage of total rental units vacant-for-rent was the \$100-149 range with 8.4% of the total units at this rent vacant-for-rent. Of the 606 units in the region for rent at this range, 41% were located in Groton which had 70% of its total vacant-for-rent units at an asking rent of \$100-149.

The distribution of these vacant-for-rent units among the various rental ranges corresponds quite closely with the distribution of the occupied rental units. However, in the low-moderate rental ranges the percentage of vacant-for-rent units are greater than those of the corresponding renter-occupied units. Many of these vacant-for-rent units are located in the urban towns, and as noted earlier, are less desirable because of age and condition. Indeed, in Norwich and New London the percentages of vacant-for-rent units lacking one or more plumbing facilities are, respectively, 9.2 and 13.2 as compared to respective percentages of 3.7 and 4.6 for all units lacking one or more plumbing facilities. The implication of this is that although fairly inexpensive units are vacant-for-rent they are not always adequate in terms of facilities.

OWNER-OCCUPIED UNITS, VACANCIES, VALUES

Of the region's 40,858 owner-occupied units and vacant-for-sale units, 311 were vacant-for-sale at the time of the Census for a regional for sale percentage of 0.76%. The corresponding vacancy percentage for the state was 0.70%. 44.4% of the vacant-for-sale houses are located in the urban towns, 46.9% in the suburban towns, and 8.7% in the rural towns. Most of the towns and cities had vacant for sale percentages of less than 1 percent of total owner-occupied units. The exceptions were New London (1.1% for sale), Ledyard (1.5% for sale), Voluntown (1.6% for sale), and North Stonington (2.0% for sale).

Value (house and lot) is tabulated for owner-occupied single-

family homes on lots of less than 10 acres that have no business or medical office on the property. Value is not tabulated for mobile homes, trailers, cooperatives, and condominiums. Value is the respondent's estimate of how much the property (house and lot) would sell for if it were for sale. Data are available on 31,720 of the 40,547 owner-occupied units for a 78% sample. Value data are tabulated for the categories shown in Table 8 which depicts the number of units at each range for each town along with the median value range.*

The median value range for the region was \$15,000-19,999, and all the towns and cities either had this as the median value range or the range of \$20,000-24,999, with the exception of Voluntown which had a median range of \$10,000-14,999. 5.6% of the region's owner-occupied homes were valued at less than \$10,000 and 2.5% at greater than \$50,000. 25% of the reported units in Voluntown were valued at less than \$10,000, accounting in part for its low median value range. Griswold and Sprague had respectively, 14.2% and 10.8% of the reported units valued at less than \$10,000. These are the same two towns that had the highest percentage of rental units at less than \$80 per month. The remaining towns and cities had less than 10% of their units valued at less than \$10,000. These values ranged from a high of 9.8% in Lisbon and Norwich to a low of 2.3% in East Lyme. (Table 8.)

At the high end of the value ranges, 5.6% of the owner-occupied units in Stonington were valued at \$50,000 or greater, followed closely by New London at 5.1%. No units at this value were recorded for Lisbon, Sprague, and Voluntown.

HOUSING TYPES

Exclusive of vacant-seasonal and vacant-migratory units, 36.4% of the region's housing stock was in multi-family units as compared to 30.7% in 1960. These structures with 2 or more units grew 39.2% over the 17,761 multi-family units reported in 1960. At the state level multi-family units increased 29.2% during the same decade, and at the state level 40.4% of the housing stock was in multi-family units. This indicates that although the region's multi-family housing units grew at a faster rate than the state as a whole, as a percentage of total housing stock the region lags behind the state. 74% of the region's multi-family units are located in the urban towns, 24.6% in the suburban towns, and only 1.4% in the rural towns. The important implication of this is that although some multi-family units are locating in the suburbs,

* The same definition of median as used for rental units applies to this discussion.

TABLE 8: OWNER HOUSING DATA, 1970

	OWNER-UNIT VALUES										Total Owner Occupied Units	Median Value Range	Percent Of Units Valued At Less Than \$10,000	Percent Of Units Valued At Greater Than \$50,000	Units Vacant For Sale	Total Owner Units (Occupied and For Sale)	Percent Of Total Owner Units Vacant For Sale
	NUMBER OF UNITS VALUED AT:																
	Less Than \$5,000	\$5,000-9,999	\$10,000-14,999	\$15,000-19,999	\$20,000-24,999	\$25,000-34,999	\$35,000-49,000	\$50,000-Or Greater	Total Units Reported								
URBAN TOWNS																	
50	193	536	1,374	1,096	785	306	134	4,474	5,498	\$20-24,999	5.4	3.0	43	5,541	.8		
7	71	413	1,790	603	517	235	141	2,777	4,029	20-24,999	2.9	5.1	45	4,074	1.1		
63	450	1,318	1,541	877	611	259	125	5,244	7,330	15-19,999	9.8	2.4	50	7,380	.7		
120	714	2,267	3,705	2,576	1,913	800	400	12,495	16,857	\$15-19,999	6.7	3.2	138	16,995	.8		
SUBURBAN TOWNS																	
7	36	93	362	294	195	59	9	1,055	1,328	\$20-24,999	4.1	.9	8	1,336	.6		
6	48	184	566	562	622	322	64	2,374	2,580	20-24,999	2.3	2.7	24	2,604	.9		
25	106	246	279	140	87	31	4	918	1,481	15-19,999	14.2	.4	12	1,493	.8		
17	44	126	647	631	597	174	20	2,256	2,549	20-24,999	2.8	.9	38	2,587	1.5		
9	39	122	161	108	46	5	0	490	703	15-19,999	9.8	.0	3	706	.4		
20	92	313	1,191	789	316	31	6	2,757	3,282	15-19,999	4.0	.2	19	3,301	.6		
9	46	119	201	164	104	25	1	669	874	15-19,999	8.2	.2	0	874	.0		
5	30	70	97	67	41	13	0	323	537	15-19,999	10.8	.0	0	537	.0		
29	148	389	707	577	526	219	154	2,749	3,630	20-24,999	6.5	5.6	16	3,646	.4		
9	92	509	1,186	1,005	750	313	131	3,995	4,350	20-24,999	5.6	3.3	26	4,376	.6		
136	681	2,171	5,396	4,337	3,284	1,192	389	17,586	21,314	\$20-24,999	4.6	2.2	146	21,460	.7		
RURAL TOWNS																	
3	11	61	112	88	33	6	3	317	438	\$15-19,999	4.4	.9	2	440	.5		
7	28	70	195	106	162	42	5	615	880	20-24,999	5.7	.8	18	898	2.0		
4	14	34	36	56	67	21	3	235	354	20-24,999	7.7	1.3	1	355	.3		
13	45	68	55	29	14	8	0	232	359	10-14,999	25.0	.0	6	365	1.6		
28	109	265	451	337	338	96	15	1,639	2,376	\$15-19,999	8.4	.9	27	2,403	1.1		
284	1,504	4,703	9,552	7,250	5,535	2,088	804	31,720	40,547	\$15-19,999	5.6	2.5	311	40,858	.8		
SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.																	

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

the choice of housing type in the suburban and rural towns is still largely limited to single-family dwellings.

CONDITION OF HOUSING

The 1960 Census of Housing indicators of housing conditions have been dropped from the 1970 Census of Housing. To obtain some indication of the condition or quality of housing one must now turn to plumbing, kitchen-access, and phone data along with the value and rental figures presented earlier.

Exclusive of vacant seasonal and migratory units, 3.5% of the region's housing units lacked one or more plumbing facilities, which means that the units did not have all three specified plumbing facilities (hot and cold piped water, as well as flush toilet and bathtub or shower inside the structure) or that the toilet or bathing facilities were also for the use of the occupants of other housing units.

Table 9 indicates that of these 2,376 units lacking one or more plumbing facilities, 52.6% were located in the urban towns, 38.9% in the suburban towns, and 8.5% in the rural towns. When units lacking one or more plumbing facilities are compared with total units in a given class of towns the urban towns had 3.5% of the units lacking (same as regional average), the suburban towns 3.1% lacking, and the rural towns 6.7% lacking.

The only individual town with greater than 10% of its units lacking one or more plumbing facilities was Voluntown with 15.5% of its units in this category. Voluntown also had the lowest median value of any of the towns for owner-occupied units. At the other end of the scale was Waterford with only 1.4% of its units lacking one or more plumbing facilities, followed closely by East Lyme at 1.8%. Both of these towns had high median rents as well as high values of owner-occupied homes.

Kitchen facilities and access to living quarters are other ways to obtain some indication of housing quality. Direct access is defined as an entrance to a living quarters directly from outside the structure or through a common hall. Complete kitchen facilities include a range or stove, a sink with piped water and a mechanical refrigerator for this household only.

Four categories of access and kitchen facilities are depicted in Table 10 which shows that 98.2% of the region's housing units, exclusive of vacant seasonal and migratory, have direct access and a complete kitchen. For the region, only 9 units lacked direct access and an incomplete kitchen and 71 units had a complete kitchen with no direct access.

TABLE 9: PLUMBING FACILITIES, 1970

	<u>Units With All Plumbing Facilities</u>	<u>Units Lacking 1 Or More Plumbing Facilities</u>	<u>Total Housing Units*</u>	<u>% Lacking 1 Or More Facilities</u>
<u>URBAN TOWNS</u>				
Groton	10,680	246	10,926	2.3
New London	10,002	486	10,488	4.6
Norwich	13,483	518	14,001	3.7
URBAN TOTALS:	34,165	1,250	35,415	3.5
<u>SUBURBAN TOWNS</u>				
Colchester	1,846	55	1,901	2.9
East Lyme	3,506	63	3,569	1.8
Griswold	2,402	211	2,613	8.1
Ledyard	3,213	74	3,287	2.3
Lisbon	821	30	851	3.5
Montville	4,410	114	4,524	2.5
Preston	1,014	60	1,074	5.6
Sprague	862	31	893	3.5
Stonington	5,338	213	5,551	3.8
Waterford	5,257	73	5,330	1.4
SUBURBAN TOTALS:	28,669	924	29,593	3.1
<u>RURAL TOWNS</u>				
Bozrah	548	23	571	4.8
Franklin	408	11	419	2.6
North Stonington	1,008	73	1,081	6.8
Salem	450	23	473	4.9
Voluntown	394	72	466	15.5
RURAL TOTALS:	2,808	202	3,010	6.7
REGIONAL TOTALS:	65,642	2,376	68,018	3.5

* Exclusive of vacant seasonal and vacant migratory units.

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

TABLE 10: STATUS OF KITCHEN FACILITIES AND ACCESS
IN HOUSING UNITS, 1970

	CATEGORY 1		CATEGORY 2		CATEGORY 3		CATEGORY 4		
	DIRECT ACCESS COMPLETE KITCHEN	% OF TOTAL	DIRECT ACCESS INCOMPLETE KITCHEN	% OF TOTAL	NO DIRECT ACCESS COMPLETE KITCHEN	% OF TOTAL	NO DIRECT ACCESS INCOMPLETE KITCHEN	% OF TOTAL	TOWN TOTALS*
<u>URBAN TOWNS</u>									
Groton	10,784	98.7	126	1.2	16	.1	0	0	10,926
New London	10,112	96.92	355	3.38	18	.17	3	.03	10,488
Norwich	13,794	98.5	191	1.4	12	.08	4	.02	14,001
URBAN TOTALS:	34,690	97.95	672	1.89	46	.14	7	.02	35,415
<u>SUBURBAN TOWNS</u>									
Colchester	1,874	98.6	26	1.4	1	.05	0	0	1,901
East Lyme	3,528	98.8	39	1.1	2	.05	0	0	3,569
Griswold	2,511	96.1	100	3.8	2	.07	0	0	2,613
Ledyard	3,259	99.1	27	1.0	1	.03	0	0	3,287
Lisbon	844	99.2	5	.6	2	.2	0	0	851
Montville	4,475	98.9	47	1.0	2	.04	0	0	4,524
Preston	1,045	97.3	28	.3	1	.1	0	0	1,074
Sprague	891	99.8	2	.2	0	0	0	0	893
Stonington	5,447	98.1	96	1.7	8	.2	0	0	5,551
Waterford	5,282	99.1	44	.8	2	.05	2	.05	5,330
SUBURBAN TOTALS:	29,156	98.5	414	1.4	21	.07	2	.03	29,593
<u>RURAL TOWNS</u>									
Bozrah	562	98.4	9	1.6	0	0	0	0	571
Franklin	417	99.5	2	.5	0	0	0	0	419
North Stonington	1,050	97.1	28	2.6	3	.3	0	0	1,081
Salem	462	97.7	11	2.3	0	0	0	0	473
Voluntown	453	97.2	12	2.6	1	.2	0	0	466
RURAL TOTALS:	2,944	97.8	62	2.1	4	.1	0	0	3,010
REGIONAL TOTALS:	66,790	98.19	1,148	1.69	71	.11	9	.01	68,018

* Exclusive of vacant seasonal and vacant migratory units.

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

Of the region's 1,148 units that had direct access but no complete kitchen facilities, 58.5% were located in the urban towns, 36.1% in the suburban towns, and 5.4% in the rural towns. For given classes of towns, the urban towns had 1.9% of their units in the category, the suburban towns 1.4%, and the rural towns 2.1%. Individual towns ranged from a high of 3.8% of Griswold's units in this category to a low of 0.2% of Sprague's units having direct access but no complete kitchen. Both Sprague and Griswold had a high percentage of their units renting at \$80 or less per month, and yet in terms of plumbing and kitchen facilities, Sprague ranks better than Griswold.

Table 11 shows yet another household facility. Of the region's 64,388 occupied units, 93.5% had telephones. Suburban towns ranked highest with 95.3%, the rural towns second highest with 94.9%, and the urban towns lowest with 91.9%. Individual towns ranged from a low of 90.5% in Norwich and 90.6% in New London to a high of 97.8% in Ledyard.

LARGE HOUSEHOLDS AND PERSONS PER ROOM

The 1968 study of the region's housing conducted by the Center for Real Estate and Urban Economic Studies of the University of Connecticut identified occupied units with six or more persons per unit as large households. Of the region's 64,388 occupied units 10.5% were occupied with six or more persons per unit in 1970. This percentage is only slightly greater than the 1960 figure for large households of 10.1% (exclusive of Colchester) reported by the Connecticut Interregional Planning Program in its Technical Report #126, Housing. Large households comprise a greater share of the total number of occupied households in the suburban and rural towns than in the urban towns. 12.7% of the occupied units in the rural towns were occupied by six or more persons, 11.6% in the suburban towns, and 9.3% in the urban towns. (Table 12.)

The Bureau of the Census also computes persons per room, which is a ratio determined by dividing the number of persons living in a unit by the number of rooms* in the unit. A ratio of 1 indicates an equal number of rooms and people in a unit, a ratio of less than one indicates more rooms than persons, and

* Rooms to be counted include whole rooms used for living purposes, such as living rooms, dining rooms, kitchens, bedrooms, finished recreation rooms, family rooms, etc. Not counted as rooms are bathrooms, porches, balconies, foyers, halls, half-rooms, kitchenettes, strip or pullman kitchens, utility rooms, unfinished attics, basements, or other space used for storage.

TABLE 11: STATUS OF TELEPHONES
IN HOUSING UNITS, 1970

	<u>Occupied Units With Phone</u>	<u>% of Total Units</u>	<u>Total Occupied Units*</u>
<u>URBAN TOWNS</u>			
Groton	9,769	94.7	10,315
New London	8,841	90.6	9,754
Norwich	<u>11,893</u>	<u>90.5</u>	<u>13,136</u>
URBAN TOTALS:	30,503	91.9	33,205
<u>SUBURBAN TOWNS</u>			
Colchester	1,685	93.1	1,810
East Lyme	3,207	96.1	3,338
Griswold	2,225	91.4	2,435
Ledyard	3,094	97.8	3,165
Lisbon	794	95.3	833
Montville	4,143	95.4	4,345
Preston	986	95.3	1,035
Sprague	815	94.5	862
Stonington	4,982	94.1	5,293
Waterford	<u>5,008</u>	<u>97.0</u>	<u>5,163</u>
SUBURBAN TOTALS:	26,939	95.3	28,279
<u>RURAL TOWNS</u>			
Bozrah	540	96.6	559
Franklin	394	96.6	408
North Stonington	994	95.0	1,046
Salem	414	94.1	440
Voluntown	<u>413</u>	<u>91.6</u>	<u>451</u>
RURAL TOTALS:	2,755	94.9	2,904
REGIONAL TOTALS:	60,197	93.5	64,388

* Owner and Renter Occupied.

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

TABLE 12: LARGE HOUSEHOLDS, 1970

	OCCUPIED UNITS WITH 6 OR MORE PERSONS IN UNIT	TOTAL OCCUPIED	PER CENT OF TOTAL OCCUPIED UNITS WITH 6 OR MORE PERSONS PER UNIT
<u>URBAN TOWNS</u>			
Groton	1,161	10,315	11.3
New London	697	9,754	7.1
Norwich	1,219	13,136	9.3
URBAN TOTALS:	3,077	33,205	9.3
<u>SUBURBAN TOWNS</u>			
Colchester	241	1,810	13.3
East Lyme	408	3,338	12.2
Griswold	256	2,435	10.5
Ledyard	453	3,165	14.3
Lisbon	100	833	12.0
Montville	584	4,345	13.4
Preston	145	1,035	14.0
Sprague	107	862	12.4
Stonington	467	5,293	8.8
Waterford	529	5,163	10.2
SUBURBAN TOTALS:	3,290	28,279	11.6
<u>RURAL TOWNS</u>			
Bozrah	67	559	12.0
Franklin	47	408	11.5
North Stonington	150	1,046	14.3
Salem	49	440	11.1
Voluntown	55	451	12.2
RURAL TOTALS:	368	2,904	12.7
REGIONAL TOTALS:	6,735	64,388	10.5

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

a ratio of greater than one indicates more persons than rooms. Table 13 indicates that of the region's 64,388 occupied housing units 6% had greater than one person per room. In the urban towns, 5.9% of the units had more than 1 person per room, the suburban towns 6.0%, and the rural towns 7.0%. Although the 3 classes of towns ranked in the same order as with large households, the percentage differences separating them were smaller.

HOUSING DEMAND FORECAST

The 1968 University of Connecticut housing study projected 1980 housing demands based on the projected 1980 population for the Norwich sub-region and the Groton-New London sub-region.* This update of the housing forecast will follow the same methodology as the original forecast** based on recent 1970 population and housing data. Estimated housing demand is based upon each sub-region's projected population, household and housing stock characteristics and is shown in Table 14.

Household population was obtained by subtracting each sub-region's institutional population (assumed to be at the 1970 level) and other people not in households from the 1980 total projected population. The 1970 percentage of persons in group quarters (excluding institutional patients) for each sub-region was applied to the 1980 non-households population.

The estimated number of occupied housing units was derived by dividing the household population for each sub-region by the persons per household factor for 1970. To these figures of occupied housing units were added estimated vacant units which are either vacant-for-sale or rent or vacant-unavailable. This latter category includes the region's seasonal homes and is expected to remain at the 1970 level. Housing available for sale or rent was derived by applying the 1970 ratio of vacant-for-sale or rent housing to the 1980 total housing stock. Housing units demanded

* The Norwich Sub-region consists of nine regional towns included in the Norwich Labor Market Area: Bozrah, Colchester, Franklin, Griswold, Lisbon, Norwich, Preston, Sprague, and Voluntown.

The Groton-New London Sub-region consists of nine regional towns included in the New London Labor Market Area: East Lyme, Groton, Ledyard, Montville, New London, North Stonington, Salem, Stonington and Waterford.

** Center for Real Estate and Urban Economic Studies, the University of Connecticut. Housing Strategy for Southeastern Connecticut, Volume II: Data Analysis and Forecasts, pp. 131-136.

TABLE 13: PERSONS PER ROOM, 1970

	OCCUPIED UNITS WITH GREATER THAN ONE PERSON PER ROOM	TOTAL OCCUPIED UNITS	% OCCUPIED WITH GREATER THAN ONE PERSON PER ROOM
<u>URBAN TOWNS</u>			
Groton	726	10,315	7.0
New London	501	9,754	5.2
Norwich	725	13,136	5.5
URBAN TOTALS:	1,952	33,205	5.9
<u>SUBURBAN TOWNS</u>			
Colchester	162	1,810	9.0
East Lyme	173	3,338	5.2
Griswold	187	2,435	7.7
Ledyard	173	3,165	5.5
Lisbon	64	833	7.7
Montville	341	4,345	7.8
Preston	73	1,035	7.1
Sprague	55	862	6.4
Stonington	249	5,293	4.7
Waterford	233	5,163	4.5
SUBURBAN TOTALS:	1,710	28,279	6.0
<u>RURAL TOWNS</u>			
Bozrah	50	559	8.9
Franklin	14	408	3.4
North Stonington	86	1,046	8.2
Salem	20	440	4.5
Voluntown	34	451	7.5
RURAL TOTALS:	204	2,904	7.0
REGIONAL TOTALS:	3,866	64,388	6.0

SOURCE: 1970 Census 1st Count Summary Tape, Bureau of the Census.

TABLE 14: PROJECTED DEMAND FOR HOUSING UNITS BY
SUB-REGIONS, 1970-1980

Demand Components by Sub-Region

1.	<u>Norwich Sub-Region</u>		
A.	Total Population Estimate, (1980)		86,971
	Less: Institutional Population-----	2,294	
	Other Non-Household Population	677	
		<u>2,971</u>	
B.	Household Population		84,000
	Divided By: Persons Per Household		
C.	Occupied Housing Units		26,923
	Plus: Required Vacancies-----	968	
	Vacant But Unavailable-----	679	
		<u>1,647</u>	
D.	Estimated Housing Stock		28,570
	Less: Existing Housing Stock-----	22,732	
E.	New Housing Units Demanded, 1970-1980		5,838
2.	<u>New London-Groton Sub-Region</u>		
A.	Total Population Estimate (1980)		188,092
	Less: Institutional Population-----	1,437	
	Other Non-Household Population	14,746	
		<u>16,183</u>	
B.	Household Population		171,909
	Divided By: Persons Per Household		
C.	Occupied Housing Units		53,890
	Plus: Required Vacancies-----	1,615	
	Vacant But Unavailable-----	2,552	
		<u>4,167</u>	
D.	Estimated Housing Stock		58,057
	Less: Existing Housing Stock-----	46,121	
E.	New Housing Units Demanded, 1970-1980		11,936
3.	<u>Southeastern Connecticut Planning Region</u>		
A.	Total Population Estimate (1980)		275,063
B.	Household Population (1980)		255,909
C.	Occupied Housing Units (1980)		80,813
D.	Estimated Housing Stock (1980)		86,627
E.	Existing Housing Stock, 1970		68,853
F.	New Housing Units Demanded, 1970-1980		17,774

FOOTNOTES TO TABLE 14

Norwich Sub-Region

- A. According to 1970 Census data, 0.8% of the non-institutional population was neither in households nor inmates of institutions. This percentage was applied to the 1980 non-institutional population of 84,677 to obtain the estimate of "Other Non-household Population."
- B. The Norwich Sub-Region had an average household size of 3.12 in 1970.
- C. 3.47% of the total housing stock less unavailable vacant housing in the Norwich Sub-Region was available for sale or rent. This percentage was applied to the 1980 estimate of occupied plus available vacant housing to obtain the estimate of average vacancies.

Vacant but unavailable housing is not expected to represent a percentage of the housing stock as the total housing stock increases, but rather remain at the 1970 level of 679 units.

- D. The total housing stock of the Norwich Sub-Region was 22,982 units in 1970 which was adjusted to 22,732 units for anticipated demolitions over the decade 1970-1980.

Groton-New London Sub-Region

- A. 7.9% of the non-institutional population was neither in households nor inmates of institutions, and this percentage was applied to the 1980 non-institutional population as in footnote A for the Norwich Sub-Region.
- B. The Groton-New London Sub-Region had an average household size of 3.19 in 1970.
- C. The Groton-New London vacancy ratio of 2.9% was applied in footnote C for the Norwich Sub-Region. The vacant but unavailable housing in 1970 was 2,552 units.
- D. The total housing stock for the Groton-New London Sub-Region was 46,696 units in 1970 which was adjusted to 46,121 units for anticipated demolitions over the decade 1970-1980.

between 1970 and 1980 were derived by subtracting the existing 1970 housing supply, which was adjusted for anticipated demolitions during the decade, from the 1980 housing stock for each sub-region.

Over 17,700 units will be demanded, of which 67% are designated for the Groton-New London sub-region. The 1968 University of Connecticut Housing Study indicated a supply potential of nearly 20,000 units over the period of 1968-1980. This indicates an adequate capacity to meet the forecast needs, provided however, this supply estimate meets the needs of the low income, large, elderly, and non-white households which the University of Connecticut Study identified as those groups most likely to encounter housing problems in the near future. Estimates of the needs of these groups over the short-term to 1980 are based largely upon existing or trended characteristics since items of information such as 1970 income data are not yet available.

LOW AND MODERATE INCOME HOUSEHOLDS

The University of Connecticut housing study indicated that 12% of the region's households in 1980 are expected to be low income (under \$3,000 annual income in 1960) and 44% moderate income (\$3,000-\$7,000 annual income in 1960). Applied to the region's 1980 anticipated households this means that 9,698 households would be low income and 35,558 moderate income. If these same percentages are applied to the 17,774 units to be added over the decade, then 2,133 new low income units and 7,821 new moderate income units will be needed.

LARGE HOUSEHOLDS

In 1970, 10.5% of the occupied housing units were households with six or more persons per unit. This same proportion is expected to hold through 1980 which means that nearly 8,500 large households will require housing in the region, an increase of over 1,700 units with 4 or more bedrooms. Although no current income data are available, it is anticipated that some of these added units will fall both in the low and moderate income categories, and additionally, about 35% of these units will be required to be rental.

NON-WHITE HOUSEHOLDS

Non-whites accounted for 3% of the total regional population in 1960 and this percentage increased to 4.2% in 1970. This same rate of growth would result in 5.4% of the total population in 1980 being non-white, or 14,853 persons. The University of Connecticut Study indicated that 88% of the total non-white population resided in households with an average family size of 3.6. When applied to the 1980 population figure of 14,824 this

results in a household population of 13,071 residing in 3,600 units which is an increase of 1,290 units over occupied 1970 non-white units. Based upon existing income data, 25% or 324 units should be in the low income category and 56% or 726 units in the moderate income bracket.

ELDERLY HOUSEHOLDS

Elderly households in 1980 were estimated at 18% of total households by the University of Connecticut Study.

Based upon the housing projection (Table 14), 14,546 households with a head over 65 will be in existence in 1980. In 1970 elderly households accounted for 8.4% of total household population and 16.8% of the total number of households. These households will generally be smaller in size than the average family and will have less income than the average household. It is estimated that 50% of these households will require rental housing and approximately 35% will be in the low-moderate income bracket.

NAVY HOUSING

In 1971 Navy households totaled 5,785 of which 5,191 were living in the area. Of this latter total, 2,041 families were in military-owned or military-controlled rental housing. The balance of approximately 3,150 families were in private housing, the majority of which were rental units. With little or no additional government-owned military housing planned for the near future, there appears to be a continuing market for private rentals to military families of at least 3,200 units. For those groups which receive the lowest housing allowances, the lower enlisted ranks and junior officers, there will be a demand for low-moderate income rentals to be available in this private sector. In addition, units will have to be replaced in this private sector that are substandard. In 1971 the Navy estimated that 518 private housing units rented by Navy personnel were substandard. One possible method of meeting these needs which the Navy currently uses successfully is in-lease housing. Under this arrangement the Navy rents a certain number of units from a private developer over a specified time period. Because of a substantial number of applicants on the Navy-controlled housing waiting lists in 1971 the Navy has requested authorization for 500 more in-lease units.

INTRODUCTION

This updating of information on land use in Southeastern Connecticut presents, as closely as possible, conditions as they existed in the spring-summer of 1970. Information was gathered from field survey, from 1970 air photos, and from land use data in the SCRPA library. Although this information was gathered and recorded in detail, generalizations were at times necessary when presenting the material in report illustrations. The detailed survey maps are available for inspection in the SCRPA office.

The following categories of land use were plotted and are included in this report.

DEVELOPED LAND

Residential Very High Density: 8.1 families per acre or greater.

Residential High Density: 2.1 - 8 families per acre.

Residential Medium Density: 1.1 - 2 families per acre.

Residential Low Density: 1 or less families per acre.

Industrial-Intensive: manufacturing, fabrication, assembly, and processing.

Industrial-Extensive: extractive processes such as mining, sand and gravel pits, open or enclosed storage tanks and yards.

Transportation, Communications, Utilities: highways, public, and semi-public facilities providing such needs as transportation, communications, gas, electricity, and water.

Institutional-Intensive: governmental and institutional buildings such as schools, churches, hospitals, prisons, municipal buildings, clubs, etc.

Institutional-Extensive: open areas connected with the above intensive uses.

Commercial: retail, wholesale, service trades and professional offices.

OPEN SPACE

Reserved Open Space: cemeteries, state forests, reservations, and public-private preserves.

Water Reservoir Sites: holdings of water companies.

Active Recreation: parks, playgrounds, camping areas, golf courses, and other outdoor recreational lands designed for intensive use.

AGRICULTURE: cropland, orchards, pastures, dairy and poultry farms, and open fields.

UNDEVELOPED: vacant land, mostly forests and wetlands.

Because of graphic constraints (scale, color) the Residential Very High Density and High Density categories were combined into a High Density Residential category, and the Medium and Low Density Residential categories were combined on the land use map, Figure 4 which is contained in a pocket inside the back cover of this report. In addition, industrial extensive and intensive uses were combined into one Industrial category and Water Reservoir Sites were included in the Reserved Open Space category. In intensively developed urban areas residential, commercial, industrial, and institutional uses were combined into a category of Mixed Urban Uses.

REGIONAL PERSPECTIVE

Southeastern Connecticut is still largely undeveloped, with only 14.3% of the region used for intensive purposes. Out of the total land area of the 18-town region of 559.2 square miles, this development occupies 79.9 square miles. The distribution pattern of this development follows quite closely the population distribution in the inverted "T" along the coast of Long Island Sound and the Thames River Valley. The urban and suburban

towns* account for 30.4% and 60.4% of the region's total development, respectively. The rural towns account for only 9.2% of the total development. In terms of the region's total land area of 559.2 square miles, the urban towns comprise 11% of this total, the suburban 60%, and the rural 29%. When developed areas are compared with total town areas, the urban towns as a group are 38.4% developed, the suburban towns 14.5% developed, and the rural towns 4.6%. This pattern of development is very evident in the land use map, Figure 4. For the region as a whole the proportions of land use in developed, open space, agricultural, and undeveloped uses are shown in Figure 5.

DEVELOPED LAND USES

Regional totals for developed, open space, agricultural, and undeveloped uses are found in Table 15. Discussions of these categories follow below.

HOUSING

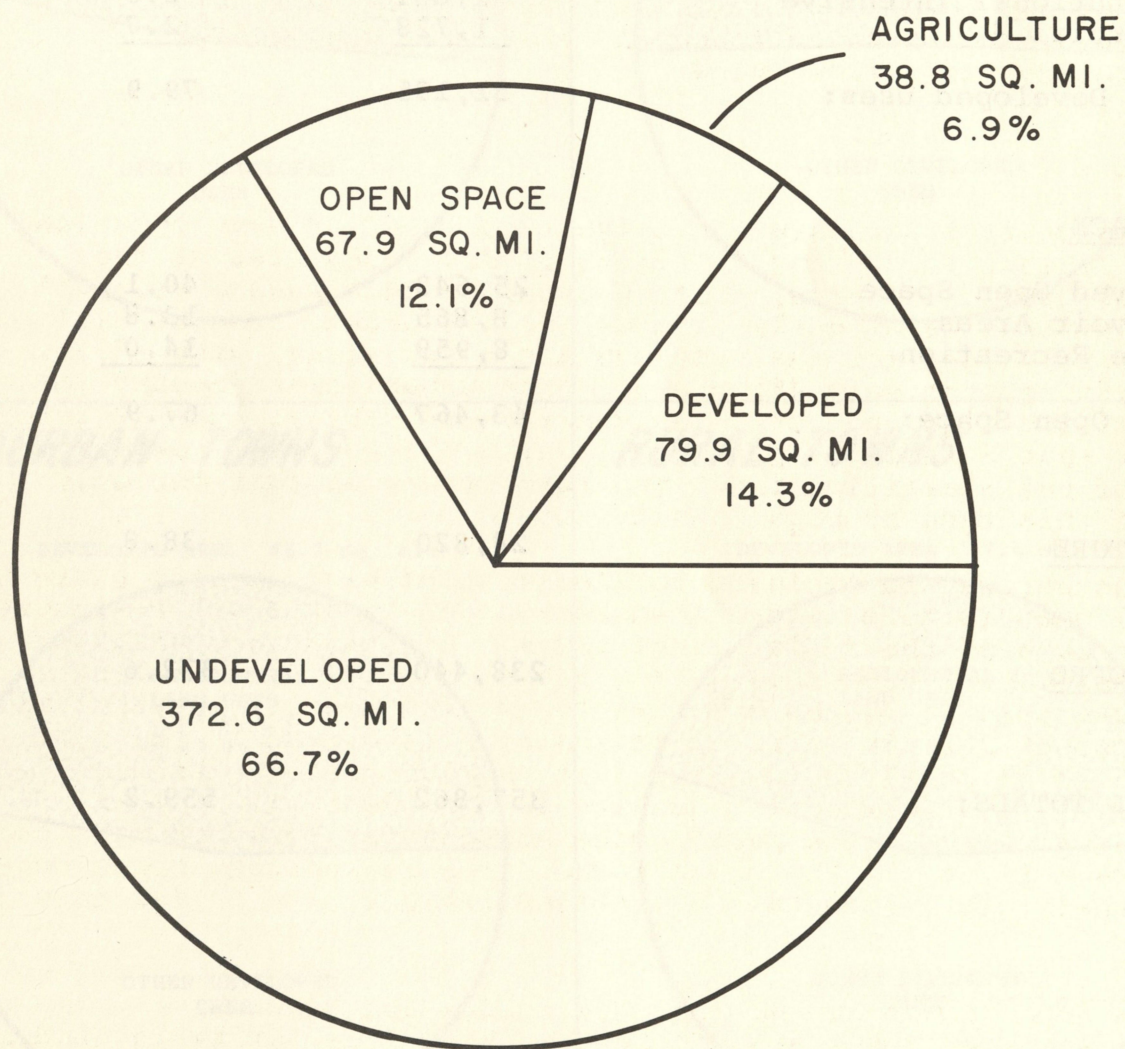
Residential uses are the largest consumer of developed land in the region, accounting for 48.4% of developed uses at the regional level. In area, housing occupies 38.7 square miles.** The percentage is slightly greater for the urban towns at 51% and slightly less for the suburban and rural towns, with 47.7 and 44.6% respectively (Figure 6). The urban towns account for 54.4% of the high and very high density residential uses (2.1 to greater than 8 families per acre), while the suburban towns have 44.4% of the classification. The rural towns account for only 1.2% of this type of high density development.

Another way to evaluate the location of high density residential uses is to consider them as a percentage of all residential land in each of the 3 classes of towns. High and very high density residential uses account for 64% of all residential land in the urban towns. In the suburban towns high density residential uses account for 28% of total residential land, and in the rural towns 5.2% of total residential land is high density (Figure 7). However, if low residential density is considered (1 or less families per acre), the rural towns account for 20.4% of the total use versus 12.6% for the urban towns. The 10 suburban towns continue their high percentage of residential use with 67 for this density.

* The urban towns are Groton, New London and Norwich. The suburban towns are Colchester, East Lyme, Griswold, Ledyard, Lisbon, Montville, Preston, Sprague, Stonington, and Waterford. The rural towns are Bozrah, Franklin, North Stonington, Salem, and Voluntown.

** A square mile is 640 acres.

REGIONAL LAND USE 1970



LAND AREA : 559.2 SQ. MI.

SOURCE : SCRPA SURVEY

FIGURE 5

TABLE 15: LAND USE DATA, 1970

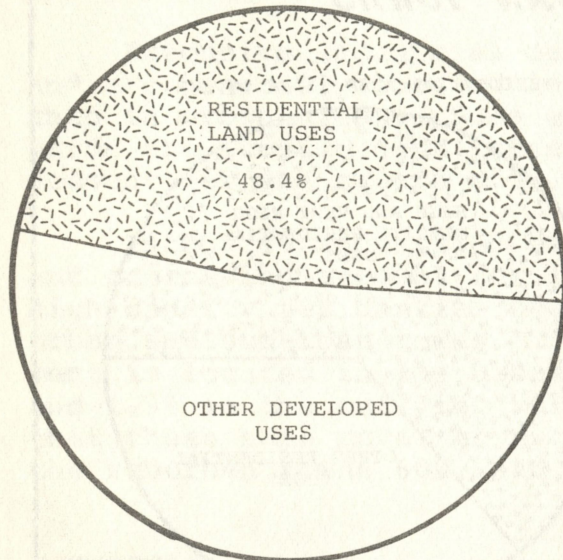
<u>DEVELOPED</u>	ACRES	SQUARE MILES
Very High Density Residential	1,206	1.9
High Density Residential	8,082	12.6
Medium Density Residential	6,509	10.2
Low Density Residential	8,956	14.0
Industrial Extensive	669	1.0
Industrial Intensive	798	1.3
Transportation, Communications, Utilities	15,482	24.2
Institutional Extensive	5,904	9.2
Institutional Intensive	1,801	2.8
Commercial	<u>1,728</u>	<u>2.7</u>
Total Developed Uses:	51,135	79.9
<u>OPEN SPACE</u>		
Reserved Open Space	25,643	40.1
Reservoir Areas	8,865	13.8
Active Recreation	<u>8,959</u>	<u>14.0</u>
Total Open Space:	43,467	67.9
<u>AGRICULTURE</u>	24,820	38.8
<u>UNDEVELOPED</u>	238,440	372.6
REGIONAL TOTALS:	357,862	559.2

SOURCE: SCRPA Survey.

RESIDENTIAL LAND USES AS A PERCENT OF DEVELOPED USES, 1970

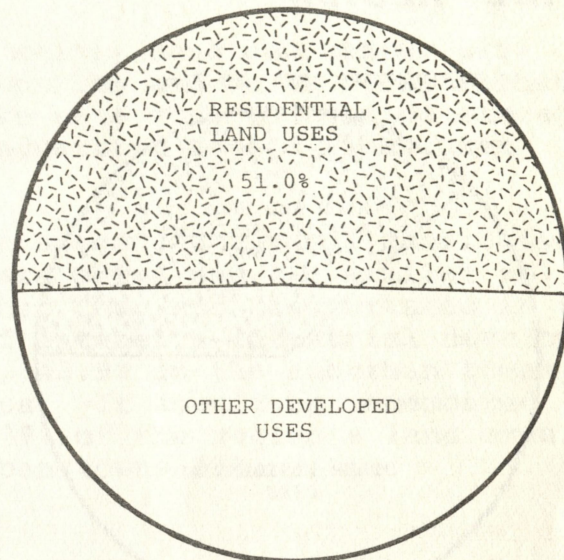
THE REGION

DEVELOPED AREA 79.9 sq. mi.



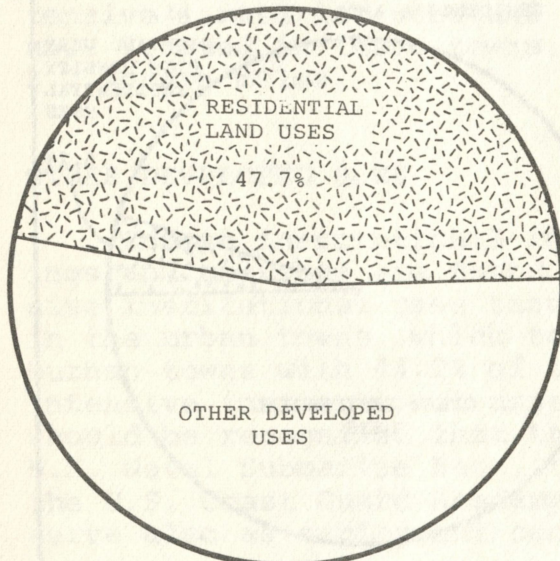
URBAN TOWNS

DEVELOPED AREA 24.3 sq. mi.



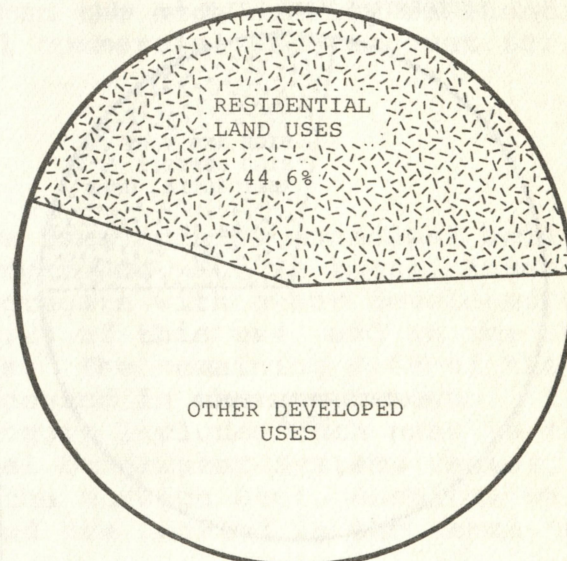
SUBURBAN TOWNS

DEVELOPED AREA 48.2 sq. mi.

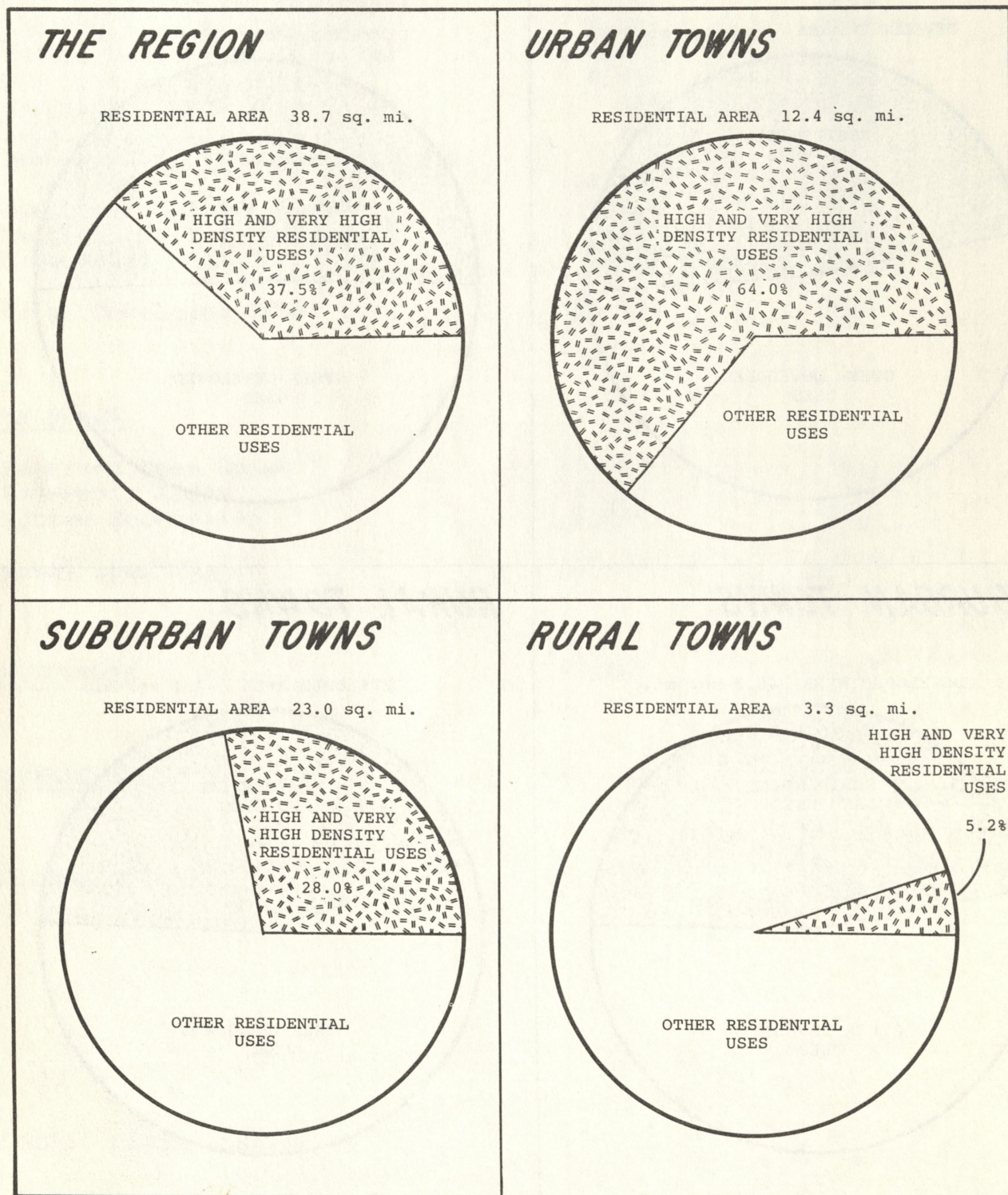


RURAL TOWNS

DEVELOPED AREA 7.4 sq. mi.



HIGH AND VERY HIGH DENSITY RESIDENTIAL LAND USES AS A PERCENT OF RESIDENTIAL LAND, 1970



SOURCE: SCRPA SURVEY

FIGURE 7

This locational pattern becomes clearer when low density housing is considered as a percentage of all residential land in each of the three town categories. Low density uses account for 14.3% of all residential land in the urban towns. In the suburban towns low density uses account for 40.8% of total residential land, and in the rural towns 85.4% of the residential land is in low density use.

INDUSTRY

Extensive industrial uses are mainly sand and gravel pits and are generally located in the suburban and rural areas rather than in urban areas. Some extensive uses such as outside storage yards are located near intensive industrial uses. These uses account for one square mile.

Intensive industrial uses such as manufacturing, fabrication, and processing account for 1.3 square miles and are similar to high density residential uses in that they are concentrated in the urban and suburban towns. 54.2% of intensive industrial development is located in the urban towns, 43.9% in the suburban towns, and 1.9% in the outlying rural towns. It should be remembered that these same rural towns total 29% of the region's land area, the suburban towns 60%, and the urban towns 11%.

COMMERCIAL

94.6% of the region's commercial activity is concentrated in the urban and suburban towns, which respectively account for 50.8% and 43.8% of the commercial development. This is slightly less than manufacturing which has 98.1% of its development in the urban and suburban towns. The remaining 5.4% of the commercial development is located in the rural towns, which is more than the intensive industrial uses and more than the high density residential uses located in these towns. Total commercial uses account for 2.7 square miles.

OTHER DEVELOPED USES

Common institutional intensive uses such as municipal buildings and churches are found in every town. But in total, intensive institutional uses tend to aggregate with other developed uses in the urban towns, which total 53.2% of this use, and in the suburban towns with 44.2% of this use. The remaining 2.6% of the intensive institutional uses are located in the rural towns. It should be recognized that this category includes such uses as the U.S. Naval Submarine Base, the Naval Underwater Systems Center, the U.S. Coast Guard Academy, and the Norwich State Hospital which serve also as employment centers and are located in the urban towns.

Extensive institutional uses are generally open areas connected

with the above intensive uses. 89% of this use is located in the suburban towns, 10.1% in the urban towns, and .9% in the rural towns. Together, institutional intensive and extensive uses total 12 square miles.

Transportation, communication, and utility uses account for 29.7% of the developed uses at 24.2 square miles. With some limited exceptions, most of this use is attributed to local roads, state highways, and limited access highways. For this use the rural town percentage increases to 14.6% while the urban towns account for 29.4% of the use and the suburban towns 56%. The increase in use in rural areas as compared to other more developed uses is probably due to the prevalence of highways in all sections of the region, rather than just in the more developed urban areas.

RESERVED OPEN SPACE USES

Open space uses in Southeastern Connecticut account for 67.9 square miles, or 12.1% of the region's total land area. This is land used for local and state parks, state forests, Indian reservations, cemeteries, hunting-sportsmen areas, nature preserves, reservoir holdings, and other active recreation purposes.

State preserves such as forests, Indian reservations, and cemeteries are the largest users of reserved open space, accounting for 59.0% of the total with 40.1 square miles. With the exception of cemeteries, these generally unintensified uses are located in the outlying suburban-rural areas. Indeed, 54.4% of this use is located in the rural town of Voluntown with its extensive areas of state forests.

Reservoir sites and recreational uses account for the remaining 41% of this category with reservoirs totalling 20.4% and recreational uses 20.6%. Reservoir sites tend to be located around the margins of the populations concentrations that they serve in the urban towns and extend out along impounded stream valleys in the suburban and rural towns. They occupy 13.8 square miles.

Recreational uses along the coastline, along the rivers and lakes of the urban and suburban towns, and near the urban-suburban centers account for 77.9% of the recreational uses. The remaining 22.1% of the recreational uses are located in the rural towns. The total active recreational acreage (public and private) amounts to 40.7 acres per 1,000 persons. Although this figure might appear generous, it should be noted that this includes all the acreage of a facility even though the facility may not be entirely developed for use. Also, recreational facilities have many users from outside the region so they serve a larger population than that of the region alone. Recreational uses total 14 square miles.

AGRICULTURE

The air photo survey indicates that there are 38.8 square miles of active agricultural land in Southeastern Connecticut, which is about 6.9% of the region's land area. Areas were included in this use if they displayed some signs of agricultural activity such as machinery marks and trails, harvest patterns, animal trails, and crop-plow striations. Because of agriculture's un-intensive character, the dividing line between active and passive use is difficult to determine, so it is possible that some of the land included in this category has reverted, or is in the process of reverting, to an unused state. Most of the land used for agriculture is located in the rural towns and the outer sections of the suburban towns, which together account for 95.1% of the agricultural uses.

UNDEVELOPED LAND

372.6 square miles, or 66.7%, of Southeastern Connecticut is undeveloped, which means this land is not used for developed, open space, or agricultural purposes. This land includes forests, wetlands and open fields which for the most part lie beyond the developed urban towns. These urban towns account for only 8.2% of the total undeveloped land, the suburban towns 63.3%, and the rural towns 28.5%.

Although Southeastern Connecticut has a large area of undeveloped land not all of this is suitable for future intensive development. Factors such as topography (slope), soil and bedrock, and flooding should be considered in evaluating potential uses for undeveloped lands. Town by town descriptions of some of these factors are available in the SCRPA office.

CHANGES IN GROWTH

Land use changes between 1962 and 1970 were plotted to determine where new growth was occurring. The urban towns accounted for 21.5% of this new growth, the suburban towns 66.5%, and the rural towns 12%. These same groupings of towns account for 11%, 60%, and 29% of the region's land area. Although the suburban towns as a group accounted for 66.5% of the new growth, it should be noted that only 14.5% of their total land area is developed for intensive purposes. The same is true of the rural towns with 12% of the growth, but yet they are only 4.6% developed. By way of contrast the urban towns accounted for 21.5% of the growth, but they are 38.4% developed. This indicates that although all three

classes of towns have ample room for future growth, the suburban-rural towns have the most room, and presently the suburban towns are the fastest growing, continuing a trend first recognized in 1962.

New growth in the urban towns was generally in-filling of or accretion to existing development, usually towards the periphery of these areas. Growth in the suburban towns was scattered and not concentrated as in the urban towns. Overall growth is following the Regional Development Plan in that the more intensive developed uses are locating in the urban towns and the less intensive developed uses in the suburban-rural areas.

In particular new industrial growth has located almost entirely in areas recommended for industrial use on the Regional Development Plan. Commercial uses have located generally near the qualitative commercial symbols on the Regional Plan, although not in a cohesive manner, but usually in scattered or strip development patterns. Residential growth appears to be scattering along existing streets and roads and in scattered subdivisions with no distinctive, cohesive communities emerging. The Regional Plan encourages a cohesive type of development rather than strip or scattered development. Residential densities are in line with those of the Regional Plan except in some of the suburban towns where new apartment growth has occurred. Except for a small amount of residential development, no new growth has occurred in any of the areas identified as potential village sites on the Regional Plan.

In summary it would appear that except for scattered commercial and residential growth, development in general is occurring in accord with the Regional Development Plan.

DESCRIPTION

The proposed zoning map shows a division of the town into various zones. The zones are defined by their location and the type of land use permitted within them. The zones are: 1. Residential Single-Family (RS), 2. Residential Medium-Density (RM), 3. Residential High-Density (RH), 4. Commercial (C), 5. Industrial (I), 6. Office (O), 7. Public Use (P), 8. Agricultural (A), 9. Forest (F), 10. Wetlands (W), 11. Water (W), 12. Other (O). The zones are shown on the map with their respective boundaries and colors.

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V. ZONING

RESIDENTIAL ZONING

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INTRODUCTION

Current local land use policies are reflected in the adopted zoning regulations of the region's towns and cities. Presently, 15 of the 18 municipalities have adopted full zoning regulations. One other, the Town of Franklin, has adopted a uniform lot size for the entire town. The Towns of Griswold and Voluntown have no zoning regulations. In addition, there are 9 subunits with zoning powers separate from those of the town. These are the City of Groton, the Boroughs of Jewett City, Stonington, and Colchester, the Noank Fire District, Groton Long Point, and three Beach Associations in East Lyme.

The composite zoning map, Figure 8, divides the zoning regulations into three major categories: residential, commercial, and industrial. The special category includes such zones as flood plains, tidal marshes, and commercial-industrial-residential combinations. Each of these uses is discussed below and is summarized in Table 16. This zoning section represents closely as possible conditions as they existed in the fall of 1970.

RESIDENTIAL ZONING

Land zoned for residential purposes accounts for 91% of the region's zoned land. This easily makes residential zones the dominant zoned use, although one should remember that an entire town is usually zoned and that this often includes public open space which is not available for development.

Most of the residentially zoned land is intended for low density use. Table 17 reveals that of the total land in residential zones 94.6% is intended for lot sizes of 20,000 square feet or greater. Specifically, 24.8% of this use is in the 20,000-39,999 square feet category and 69.8% is in the 40,000 or greater category. The balance of 5.4% is intended for less than 1/2 acre lots. Specifically, 1.1% is in the 12,001-19,999 square feet category, and 4.3% in the 12,000 square feet or less lot size category.

In this last most dense lot size category of 12,000 square feet or less are included the zones intended primarily for multi-family housing. But only 13.9% of this category is zoned for multi-family housing, and these areas are located entirely in the urban towns of Groton, New London, and Norwich.* In terms

* Since the section was written the Town of Waterford has added a multi-family section to its zoning ordinance.



2

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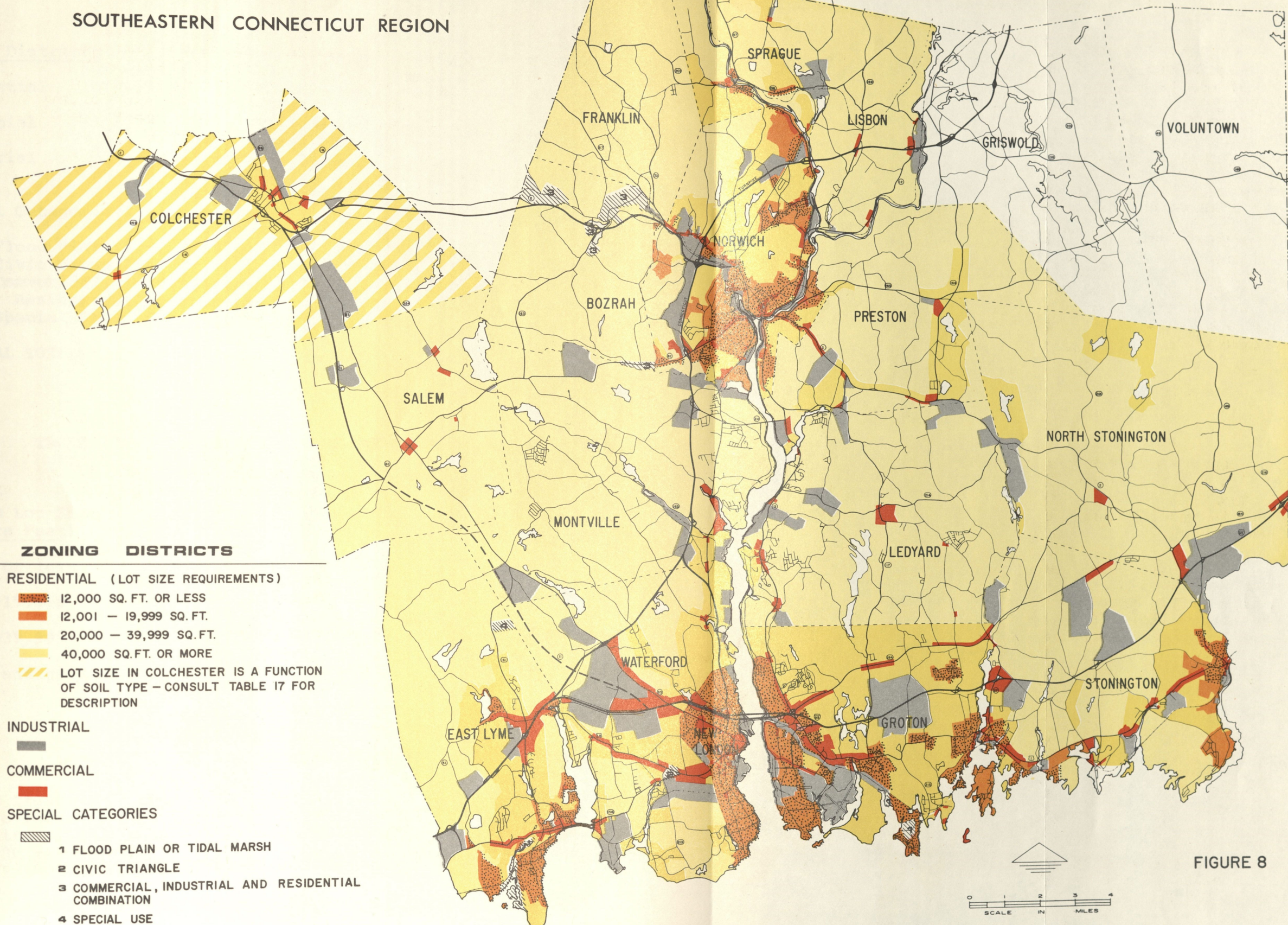
SPI



COMPOSITE ZONING MAP

SOUTHEASTERN CONNECTICUT REGION

U.P.A. PROJECTS CONN. P-120 AND P-104
THE PREPARATION OF THIS REPORT WAS FINANCED IN PART THROUGH AN URBAN PLANNING GRANT FROM THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, UNDER THE PROVISIONS OF SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED, THROUGH A REGIONAL PLANNING ASSISTANCE GRANT FROM THE OFFICE OF STATE PLANNING, AND THROUGH CONTRIBUTIONS FROM THE MEMBER COMMUNITIES OF THE SOUTHEASTERN CONNECTICUT REGIONAL PLANNING AGENCY.



SOURCE: SCRPA SURVEY

PREPARED BY THE SCRPA STAFF - 1971

FIGURE 8

COMPOSITE TOWING MAP

SOUTHEASTERN CONNECTICUT REGION



TOWING DISTANCES

1. DISTANCE FROM NEW HAVEN TO BRIDGEPORT

12.000 - 12.000 ON LINE

12.000 - 12.000 ON LINE

12.000 - 12.000 ON LINE

12.000 - 12.000 ON LINE

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TABLE 16: EXISTING ZONING, 1970

<u>Zoning Districts</u>	<u>Acres</u>	<u>% of Total</u>
Residential	281,470	91.0
Commercial	6,592	2.1
Industrial	19,690	6.4
Special Categories		0.5
1. Flood Plain or Tidal Marsh	257	
2. Civic Triangle	92	
3. Commerical, Industrial, and Residential Combination	1,025	
4. Special Use	<u>110</u>	<u> </u>
REGIONAL TOTALS:	309,236	100.0

TABLE 17: RESIDENTIAL ZONING CATEGORIES, 1970

<u>Minimum Lot Size (Square Feet)</u>	<u>Acres</u>	<u>% of Total</u>
12,000 or less	12,025	4.3
12,001-19,999	3,008	1.1
20,000-39,999	69,997*	24.8
40,000 and greater	<u>196,440</u>	<u>69.8</u>
Total:	281,470	100.0

* This figure includes 27,566 acres of the Town of Colchester whose lot size is a function of soil type. Class A & B soils require 31,000 square feet lots, and Class C soils require 40,000 square feet lots.

SOURCE: SCRPA Survey.

of total residential zoning this multi-family use accounts for only 0.6% or 1,672 acres. In addition, multi-family housing is allowed in some towns as a permitted use or as a special use in zones in which it is not the intended, basic use such as in single family or commercial zones. Generally, minimum lot size or lot area required per unit of multi-family housing is greatest in the suburban and rural towns and least for the urban towns.**

In terms of general location, there is a correlation between the residential density zone and type of town location. In the most dense category (12,000 square feet or less) 82.3% of this zone is located in the urban towns, 17.7% in the suburban towns and none in the rural towns. Conversely, in the least dense category (40,000 square feet or greater) 1.9% of the zone is in the urban towns, 61.1% in the suburban towns, and 37.0% in the rural towns.

This distribution of residential zones is reflected in current residential land use as the reader will recall from the earlier section. However, one should realize that the urban towns with the highest density residential zones are also the towns that are the most developed, and so this in effect limits the expansion of higher density housing.

The prevalence of lower densities in the suburban-rural towns can be justified in part by lack of public sewer and water facilities. As these facilities become available in the suburban towns, consideration should be given to allowing higher residential densities than presently exist. Unless such zoning changes occur as facilities become available, the very real need for higher density housing in this region cannot be met.

COMMERCIAL ZONING

All of the zoning regulations provide for some type of commercial activity. A total of 6,592 acres are zoned for commercial use. With a present commercial land use density of one acre of commercial land use per 127.4 residents, the land presently zoned for commercial activity could support a population of nearly 840,000 or over 3.5 times the present regional population. Current population projections foresee a regional population of 350,000 by the year 1990.

** The urban towns are Groton, New London and Norwich.
The suburban towns are Colchester, East Lyme, Griswold, Ledyard, Lisbon, Montville, Preston, Sprague, Stonington, and Waterford.
The rural towns are Bozrah, Franklin, North Stonington, Salem, and Voluntown.

In terms of the pattern of these commercial zones, the elongated, narrow business strips on either one or both sides of a highway first recognized in 1962 as a potential problem are still evident in the local zoning maps. In recognition of this, the Regional Development Plan postulated that fewer traffic problems would result if compact commercial areas with controlled access were developed. This development in depth rather than strip also favors the attractive power of a grouping of stores rather than an individual business.

INDUSTRIAL ZONING

This trend to overzone is also observed in industrial zoning. Industrial zones account for just 6.4% of the region's total zoning, but this amounts to 19,690 acres. Presently, 798 acres are used for manufacturing activities at a density of 33.5 workers per acre of use. (This is essentially the same density as existed in 1962). When viewed in terms of potential employment and population levels, these 19,690 acres produce interesting results. At the present employee density, existing zones could accommodate about 659,000 workers. If one assumes that new industrial zones will function at lower employee densities, say to half of present densities or 16 workers per acre, the industrial zones still could accommodate a work force of over 315,000, or over 11 times the present manufacturing work force. At the present ratio of industrial land use to population, the existing industrial zones could support a population of over 5,400,000.

It is ironic to note that the lack of water and sewer facilities which is cited as justifying the lack of multi-family zoning in the suburban towns does not seem to impede industrial zoning. All of the zones intended primarily for multi-family housing are located in Groton, New London, and Norwich, yet only 25.8% of the region's industrial zoning is located in these towns. Conversely, 64.1% of the region's industrial zoning is located in the suburban towns which have none of the zones intended primarily for multi-family housing.

SPECIAL CATEGORIES

Conservation uses do not rate very high in terms of zoning. Only 257 acres are zoned for flood plain or tidal marsh uses, although SCRPA's 1963 study, Land Characteristics, indicated a total of 1,068 acres of tidal marsh areas in the region. Zoning is a legitimate means to limit development on tidal marsh because the risk of flooding is involved. Presently, only the Towns of

Groton and East Lyme have flood plain or tidal marsh zones.

The remaining special uses are combination zones. The Town of Bozrah has a zone which is a combination of industrial, commercial, and residential uses, and Waterford has a Civic Triangle Zone permitting residential, commercial, and governmental uses.

CONCLUSIONS

Since 1962 the number of towns with adopted full zoning regulations has increased from 8 to 15, while the acres zoned have increased from 145,318 to 309,236. It is interesting to note that although the acreage of zoned land has more than doubled, the percentage breakdown of each major use has remained nearly constant. This is shown below.

PERCENTAGE OF TOTAL ZONING

	<u>1962</u>	<u>1970</u>
Residential Uses	91.1	91.0
Commercial Uses	2.5	2.1
Industrial Uses	6.4	6.4
Special Uses	-	0.5

The trends of a high percentage of the residentially zoned land being limited to low density development, and of an overabundance of commercial and industrial land which were first recognized in 1962 are still present in current zoning regulations. Low density residential zoning (40,000 square feet or greater) accounted for 62.2% of the residentially zoned land in 1962. In 1970 this same category accounted for 69.8% of all residentially zoned land. This suggests that according to present zoning, future housing in the region will be quite limited to low density, single-family homes, thereby narrowing the range of housing types. The reader will recall that over 94% of the residentially zoned land is intended for lot sizes of 20,000 square feet or greater.

Although flood plain zoning has increased since 1962, not all flood plains are protected from development under present zoning regulations.

The number of subunits with power to zone has decreased from 14 in 1962 to 9, thereby reducing some of the complexities of land use control such as duplication of effort, administrative procedures, and compatibility of the sub-unit zoning with that of the town.

Current zoning policies reflect the Regional Development Plan

in that the high density residential zones are concentrated in the urban areas. However, in the suburban and rural towns the residential densities rapidly decrease to the large lot category and the medium to high density residential centers and villages of the Regional Plan do not emerge from the current zoning.

At the other end of the density scale the areas proposed for open space, potential reservoir sites, and low density development (3 or more acres per family) also do not emerge from the current zoning policies. This is most likely due to the fact that other than flood plain zoning, open space or conservation zones are not permitted in Connecticut. In addition, three-acre residential zoning is usually considered prohibitive and only two towns currently have residential densities in this category.

In terms of commercial zoning, all of the areas shown as commercial on the Regional Plan, with one exception, are zoned for commercial uses. However, as noted earlier, the elongated, narrow, highway-intensive commercial strip takes precedence over the compact commercial centers proposed in the Regional Plan.

All of the areas depicted as industrial on the Regional Plan are zoned industrially, although in total, twice as much land is zoned industrially as is proposed in the Regional Development Plan.

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